

This is the html version of the file <http://people.netscape.com/richm/DS60Training/DS60Training.ppt>.  
Google automatically generates html versions of documents as we crawl the web.  
To link to or bookmark this page, use the following url: [http://www.google.com/search?q=cache:X-4o\\_z9T1qcJ:people.netscape.com/richm/DS60Training/DS60Training.ppt+%22replica+update+vector%22&hl=en&ie=UTF-8](http://www.google.com/search?q=cache:X-4o_z9T1qcJ:people.netscape.com/richm/DS60Training/DS60Training.ppt+%22replica+update+vector%22&hl=en&ie=UTF-8)

*Google is not affiliated with the authors of this page nor responsible for its content.*

These search terms have been highlighted: **replica update vector**

# Netscape Directory Server Training

Rich Megginson  
Directory Engineering  
[richm@netscape.com](mailto:richm@netscape.com)  
May 30, 2002

## Product Overview (part 1)

Current version is Directory Server 6.02,  
supported on Solaris 8, HP-UX 11, NT 4.0  
SP6, Windows 2000 SP 2, and Linux (Red Hat  
7.2 and Red Hat Advanced Server, SUSE 8)

No support for Solaris 7 (2.7) – upgrade to 8  
instead

Directory Server 6.02 will be bundled with some upcoming version of HP-UX

## Product Overview (part 2)

External Website

<http://enterprise.netscape.com/>

Product Marketing <http://sbspm/>

Directory Engineering <http://sbseng/sbs-dir/ds>

Directory Documentation

<http://enterprise.netscape.com/docs>

## Installation

DS 6.0 installation is very similar to DS 4.x installation

Main difference: cannot setup replication in advanced mode installation

The default suffix now uses dc style naming

e.g. dc=example,dc=com instead of the o style naming e.g. o=airius.com – dc style naming is strongly encouraged

Always run dsktune before installation to make sure the machine has the recommended configuration, especially if you have problems

Use setup –k to save the install.inf file (setup/install.inf) to make a silent install file

## Installation Lab (part 1)

Install Directory Server 6.02 on your machines now, using the defaults – use “password” for the Directory Manager password and “admin” for the admin password.

Unpackage the installer

Run dsktune

Run setup

After installation is complete, you should be able to run startconsole and log into the

Netscape Console interface.

Instructor will confirm that all students now have a working Directory Server.

## Installation Lab (part 2)

Create a new instance using the silent install file created during installation as a template

Modify the UserDirectory directives, the SlapdConfigForMC directive, the UseExistingMC directive, and make sure the new port number and instance name are unique

Instructor will confirm that all students now have another working Directory Server.

## Installation Summary

Install is very similar to 4.x

What are the main differences?

What does dsktune do?

Platform support has changed slightly

What platforms supported in 4.x are no longer supported?

Troubleshooting

Make sure DNS is set up properly

Run dsktune

What are your questions?

## LDAP Interchange Format

LDIF stands for LDAP Interchange Format. It is the standard file format for LDAP data exchange.

LDIF is defined by RFC2849

<http://www.ietf.org/rfc/rfc2849.txt>

DS 6.0 supports LDIF version 1 – the major change is that you can now specify a value as a file:/// URL e.g.

jpegPhoto:< file:///myphoto.jpg

## LDIF Lab

Load an LDIF file containing a file:/// URL as a binary value – the example file is ldifv1-example.ldif – do an ldapsearch on the attribute to see the base64 encoded value

## LDIF Summary

The preferred method for loading binary data is the attribute:< file:///path/filename method

Questions?

## Configuration File Format (part 1)

Major changes from 4.x

No more slapd.conf, slapd.ldbm.conf – data has been moved to dse.ldif

Schema has its own subdirectory below config directory named schema

All files use LDIF format

## Example

4.x - slapd.conf  
port 389

6.0 - dse.ldif  
dn: cn=config  
nsslapd-port: 389

# Configuration File Format (part 2)

Most configuration from slapd.conf has been moved to the entry cn=config in dse.ldif

Attribute names mostly correspond to the old directive names, prepended with “nsslapd-”  
e.g. port -> nsslapd-port

Only modified values show up in the file – to see all values, use `ldapsearch` with base DN of `cn=config`

```
ldapsearch -s base -b cn=config  
"objectclass=*"
```

You are strongly discouraged to edit `dse.ldif` manually – prefer using LDAP modify instead

## Configuration File Lab

Examine the configuration file and directory layout

Open and examine `dse.ldif`

- Find the `cn=config` entry

- Find the `nsslapd-port` attribute

Edit `dse.ldif` and change a parameter, then verify using `ldapsearch`

- Must shutdown server before editing `dse.ldif`

Use `ldapmodify` to change a parameter, then examine `dse.ldif` to verify – `config-example.ldif`



# Configuration File Summary

Names of configuration files have changed

What file replaces slapd.conf?

Where are schema files found?

Configuration file format has changed

What format is being used?

How do attribute names correspond to the old directive names?

Most all configuration may be done over LDAP

What are the advantages and disadvantages of editing the configuration files by hand?

Questions?

## Schema Configuration File

# Format – part 1

## Major changes from 4.x

No more slapd.oc.conf, slapd.at.conf, slapd.user\_oc.conf, slapd.user\_at.conf, ns-  
<product>-schema.conf – naming scheme is completely different

Schema files are contained in the schema subdirectory of the config directory

All files use LDIF format – the schema format as represented in LDIF files and in the LDAP operations is defined in RFC 2252  
<http://www.ietf.org/rfc/rfc2252.txt>

## Schema Configuration File Format – part 2

### Schema file naming and loading

File name is of form NNfilename.ldif where NN is a two digit number between 00 and 99 (the first 0 is always required – no single

digit numbers allowed) – example  
00core.ldif

Files are loaded in numerical order, then alphabetically – 00core.ldif is loaded before 10rfc2037.ldif

Schema can be redefined by putting new definition in a file which is loaded after original definition – a definition of attribute type cn in 60myschema.ldif would override the definition in 00core.ldif

## Schema Configuration File Format – part 3

User defined schema, when added over LDAP, is put into 99user.ldif – acis and other attributes are stored here as well

99user.ldif replaces the old slapd.user\_oc.conf and slapd.user\_at.conf

Additional schema can be defined by adding it to a file e.g. 60myschema.ldif and copying it to

the schema subdirectory – new schema will take effect after server restart

## Schema File Lab

List and examine the files in the schema subdirectory

Examine the definition of attributetype cn in 00core.ldif

Examine the definition of objectclass inetOrgPerson in 00core.ldif

Add an attribute type using ldapmodify and verify in 99user.ldif – use schema-attr.ldif

Add an objectclass using ldapmodify and verify in 99user.ldif –use schema-objclass.ldif

Add an attribute and an objectclass by editing 99user.ldif and verify with ldapsearch

## Schema Configuration

# Summary

Schema configuration files are contained in their own directory

Where is schema stored in relation to other configuration files?

Schema file format has changed

What is the schema file format?

Schema file name format has changed

What is the naming convention and how does it effect file loading?

What is the name of the “main” schema file?

What is the name of the user defined schema file?

Questions?

## Major DS 6.0 Schema Changes (part 1)

The aci attribute is now operational – it does not show up by default with ldapsearch – it must be explicitly named on the command line (like all other operational attributes)

```
ldapsearch -s base -b dc=example,dc=com  
"objectclass=*" \* aci
```

This will retrieve all “regular” attributes and the aci attribute

New types of objectclasses: ABSTRACT and AUXILIARY – all of the old objectclasses are STRUCTURAL by default

X-ORIGIN tag used to denote user defined schema e.g. X-ORIGIN ‘user defined’

## Major DS 6.0 Schema Changes (part 2)

ABSTRACT objectclasses are only used to be the superior for other objectclasses e.g. objectclass top – you can never create an entry using only an ABSTRACT objectclass, you must use a STRUCTURAL subclass

The AUXILIARY type for objectclasses is supported but is treated just like STRUCTURAL

Attributetypes can have a superior

Schema can have a “real” description

The syntax has been cleaned up to be more RFC2252 conformant

## Major DS 6.0 Schema Changes (part 3)

### New syntaxes

Generalized Time – e.g. 20010219111430Z  
–all date/time valued attributes e.g.  
modifyTimestamp

Boolean – processed just like CIS syntax

Country Name – processed just like CIS syntax

Octet String – processed just like Binary

syntax

Postal Address – processed just like CIS  
syntax

URI – processed just like the CES syntax

## New Schema Lab

Examine the definition of the aci attribute in  
00core.ldif

Use ldapsearch and grep to list ABSTRACT  
and AUXILIARY objectclasses - be sure to use  
the -T option with ldapsearch to disable line  
wrapping

Use ldapsearch and grep to list user defined  
schema – also look at 99user.ldif

## New Schema Summary

The aci attribute is now operational



How do you search for the aci attribute now?

New objectclass types

Which ones are fully supported?

New syntax types

Can you name and describe some?

Attributes can have superiors

Schema descriptions are preserved

Questions?

## Database Configuration (part 1)

In 4.x and earlier, you could have multiple suffixes, but they were all in the same physical database – could not split them up to use different indexes or disks

In 6.0, each suffix (and subtree) may be associated with its own database

Each database may be on a different disk directory

May online import into a database without affecting other databases

## Database Configuration (part 2)

Database configuration is stored in dse.ldif – each database configuration entry is a child of cn=ldbm database, cn=plugins, cn=config

The entry cn=ldbm database also has child entries for global config (cn=config), default indexes (cn=default indexes, cn=config), and two for monitoring (cn=monitor and cn=database, cn=monitor)

Each database has a name used for the naming attribute e.g. cn=userRoot or cn=netscapeRoot

Each database is associated with a subtree e.g. cn=userRoot -> dc=example,dc=com

# Database Configuration (part 3)

Each database entry has a child entry for configuration (cn=config), monitoring (cn=monitor) and indexes (cn=index)

## Database Configuration Lab 1

Examine the entry cn=ldbm database, cn=plugins, cn=config and its children in the dse.ldif file

Use ldapsearch to find the entries with objectclass nsBackendInstance

Move a database to a new directory and change the nsslapd-directory attribute in the backend instance entry to point to the new location - make sure the server is shutdown first

# Database Configuration Summary

Support for multiple databases

Can each database be in a separate disk partition?

Support for online import

What are the customer benefits of this?

No more slapd.ldbm.conf – use dse.ldif

What is the parent entry for all database configuration?

Questions?

## Suffix Configuration (part 1)

The mapping tree is used to associate suffixes/subtrees with regular databases, distributed databases, and referrals

The mapping tree configuration is stored under `cn=mapping tree`, `cn=config` – each suffix has an entry under this e.g.

`cn="dc=example,dc=com"`, `cn=mapping tree`,  
`cn=config`

The mapping tree can be used to associate a suffix with multiple databases, in conjunction with an entry distribution plugin

The mapping tree entry has an attribute `nsslapd-state` which may hold 4 values:  
`disabled`, `backend`, `referral`, `referral on update`

## Suffix Configuration (part 2)

A suffix is in the disabled state typically during an import or when it needs to be offline

A suffix in the backend state processes read/write requests using its associated database backend(s)

A suffix in the referral state refers all operations to one or more LDAP URL referrals defined in

its nsslapd-referral attribute (multi-valued)

A suffix in the referral on update state refers all write operations (add, modify, delete) to another server (as the referral state) but processes read operations locally in its database backend(s) – this is typically used for replication consumers

## Suffix Configuration (part 3)

To create a suffix with a database, first create the database entry, then create the mapping tree entry to use that database

### Entry Distribution

The mapping tree entry corresponding to the suffix is configured to use more than one backend

Operations are distributed among the database backends

The database backends can be any number of local and chaining database backends

An entry distribution plugin is required for this – See Plugin API documentation

## Suffix Configuration Lab

Find the entries with objectclass  
nsMappingTree

Set the nsslapd-state to disabled and attempt a search

Set the nsslapd-state to referral, set the nsslapd-referral to a referral, and attempt a search – examine the access log of the referred to server to verify

Use ldapmodify to create a database and a suffix using suffix-and-db.ldif - be sure to modify all attributes which contain a suffix, a database name, or a directory/file path name

## Suffix Configuration Summary

Suffix configuration is separate from but related to database configuration

What is the parent configuration entry for suffix configuration?

What types of databases can a suffix be configured to use?

A suffix may have more than one database associated with this

What is the common term for this

What is necessary for this to happen?

Questions?

## Database Command Line Tools (part 1)

db2ldif and ldif2db have changed to work on one database backend instance at a time

You must give either the name of the backend to use e.g. `-n userRoot` or give the suffix e.g. `-`



s dc=example,dc=com

With Idif2db, if the given LDIF file contains entries from more than 1 database backend, all entries other than the ones contained in the named database (with `-n` or `-s`) will be ignored

## Database Command Line Tools (part 2)

Idif2db.pl can be used for online import e.g. `import dc=example,dc=com` and `export o=NetscapeRoot` at the same time – the old Idif2db still works but offline only

New fast online import

As fast as Idif2db, even from a remote machine (as fast as network)

Used by replication to quickly initialize remote consumers – don't use the old ORC anymore

Like `ldapmodify -a` but much faster

Use ldapmodify -B to use this feature

## Database Command Line Lab

Run db2ldif and ldif2db with no arguments to see usage information - also run db2ldif.pl and ldif2db.pl

Use ldif2db.pl to import dc=example,dc=com and at the same time use db2ldif (or db2ldif.pl) to export o=NetscapeRoot

Use ldapmodify -B to import dc=example,dc=com

## Database Command Line Tool Summary

Import and Export work on one database at a time

How do you specify the database to use?

What happens during an import when there are entries in the LDIF file not contained in the specified database?

New fast online import

What is the command line for this?

Questions?

## Chaining Database (part 1)

A database backend may be created as a chaining database backend

This is also called a Database Link

The chaining backend passes operations to a remote directory server

The chaining backend can be configured to pass certain types of LDAP controls and lookups

ACI lookups, password policy

Other plugins (uid uniqueness, referential

integrity, et. al.)

LDAP Controls (e.g. sorting, manage DSA IT)

## Chaining Database (part 2)

The entry cn=chaining database,cn=plugins,cn=config is the parent entry for all chaining backends

New instances of chaining backends are created as children of this entry with a unique name e.g. cn=mychainingdb

The child entry cn=config holds global configuration

The child entry cn=default instance config holds the default configuration values which are applied when a new chaining instance is created

# Chaining Database (part 3)

multiplexor - the server chained from (i.e. local server)

farm server(s) - the server(s) chained to (i.e. remote server)

This is the required farm server configuration to enable another server to chain to it:

- A bind DN and password or other credentials (e.g. for SSL)

- A suffix with a corresponding backend (database or chaining)

## Chaining Database Lab

Examine dse.ldif for the entry cn=chaining database and its children

Create an instance of a chaining database using ldapmodify with chaining-farm.ldif on the farm server and chaining-mux.ldif on the multiplexor server

Examine the configuration after instance creation

Perform a search against the multiplexor server - check the access log in the farm server for confirmation of the chained request

## Chaining Summary

Support for database chaining

Where is chaining configuration stored?

What configuration is required on the farm server?

A suffix may be configured to use a chaining backend rather than a local backend

How is this done?

Questions?

## Replication (part 1)

DS 6.0 allows two masters - subsequent releases will increase that number

Replica - a suffix configured to participate in replication

Master - a replica which has a database which can be updated by both client requests and replication operations from other servers

Supplier - a replica which sends replicated data to other replicas

Consumer - a replica which receives replicated data from other replicas

## Replication (part 2)

Read only consumer - a consumer which serves search and read operations from its local database but refers write operations to its supplier(s)

Replicas are usually both suppliers and consumers - these are also known as hubs, which receive updates from the masters and

pass them to other consumers

Legacy consumer - a replica can be configured to be a consumer for a 4.x server - this is the migration path - however, this replica cannot also be a 6.0 replication consumer, but it may be a 6.0 replication supplier

## Replication (part 3)

Update Resolution Protocol (URP) - this is how the server detects and resolves conflicting updates - in general, it is based on time stamps - last change wins

Each change is assigned a Change State Number (CSN) - this is comprised of a timestamp and some other information needed by replication

**Replica Update Vector (RUV)** - this contains information about the supplier and the state of changes for that supplier - used to determine how out of date or "fresh" the data on the consumer is - the supplier sends this at the



start of a replication session

## Replication (part 4)

Each entry in the replica is assigned a Unique ID, stored in the nsUniqueID attribute - this uniquely identifies the entry among all replicas, even if the entry is renamed (i.e. the MODRDN operation)

A supplier must be configured with a changelog - this holds changes sorted by CSN and is used to replay changes to consumers

No more Consumer Initiated Replication - 6.0 replication is supplier initiated only

Each master is identified by its Replica ID – a number between 1 and 65534 inclusive – this number is unique among all replicas

## Replication (part 5)

Each replica is stored as the child entry  
cn=replica of the mapping tree entry  
corresponding to its suffix e.g.  
cn=replica,cn="dc=example,dc=com",cn=mappi  
tree,cn=config

The objectclass nsDS50Replica has several  
attributes for the configuration of the replica ID,  
bind DN, updateable or read-only, legacy  
consumer support

The database is the unit of replication - you  
cannot replicate a portion of a suffix unless you  
create a separate database for the portion

## Replication Lab

Create a third instance of slapd

Configure the first and second servers as  
replica masters using replica-master.ldif as a  
template

Configure the third instance to be a replica  
consumer using replica-consumer.ldif as a

template

Examine the dse.ldif on the three servers

Do ldapsearch -s sub -b cn=config  
“cn=replica” to examine the configuration over  
LDAP

## Replication Summary

Support for Multi-Master Replication

What are the advantages and  
disadvantages of this?

How many masters does 6.0 support?

Conflict resolution based on timestamps

Which change “wins”?

New attribute nsUniqueID uniquely identifies  
entries

Replica configuration per suffix

Where is this configuration stored

Questions?

# Replication Agreements (part 1)

Replication Agreements are stored as the child entries of the cn=replica child entry of the mapping tree entry for the suffix e.g.  
cn=myAgreement,cn=replica,cn="dc=example,d tree,cn=config

Most of the replication agreement configuration is unchanged from 4.x except:

- No more subtree – the subtree is specified by the mapping tree node parent of the replica

- There are additional status and monitoring attributes which are covered in the lab section

# Replication Agreements (part 2)

## Steps for configuring replication

Create the replication bind DN on all servers

Create the changelog on all suppliers –  
cn=changelog5,cn=config

Create the replica on all servers

Create the replication agreements

Replication Agreements should always be created last, after all other replication configuration on all servers has been done

The mapping tree state referral on update is used by consumers to refer writes to the supplier

# Replication Agreements (part 3)

The mapping tree state referral is used when the replica is being initialized to refer all operations to the supplier

When a conflict is detected that cannot be automatically resolved, the entry is renamed to the original RDN + the unique ID e.g.

cn=foo+nsuniqueid=2093840293-....

This can happen for example if you add an entry with the same DN to two different masters at the same time

The result will be two entries, one named cn=foo, and one named cn=foo+nsuniqueid=29890923-....

To search for conflicts, search for the attribute nsds5ReplConflict

## Replication Agreement Lab (part 1)

Create the replication agreements using the replication-agreement.ldif as a template – each

master should have an agreement that points to the other master and to the consumer, so 4 total

Set the nsDS5BeginReplicaRefresh attribute in both replication agreements in one of the masters to initialize the other master and the consumer

Query the status attributes in replication-status.ldif to check the status

Add an entry to a master and use ldapsearch to search for it on the other master and the consumer – and query the status again

## Replication Agreement Lab (part 2)

Add an entry with the same DN but different data to each master at the same time – look for the conflicting entries - search for nsds5ReplConflict

# Replication Agreement Summary

Replication agreement configuration is stored as child entries of the replica configuration

Where is this stored?

Replication agreements should be configured last, after all other replica and changelog configuration

Replication status is stored in attributes of the replication agreement entry

Questions?

## Legacy Replication (part 1)

The configuration is very similar to the configuration of a 6.0 replication consumer except:

The entry cn=legacy consumer,



cn=replication, cn=config must be created and configured

Must set the nsDS5ReplicaLegacyConsumer attribute to “on” in the cn=replica entry

The legacy consumer feature is only meant to be used temporarily to assist in migration to 6.0 – it should not be used on a permanent basis

## Legacy Replication (part 2)

A legacy consumer cannot be a consumer for 6.0 replication, but it may be a supplier for 6.0 replication

Replication migration should begin by converting all “leaf node” consumers to 6.0, then working back towards the masters

## Legacy Replication Lab

Set up the 4.x server to be a supplier

Configure the replica to be a legacy consumer using legacy-consumer.ldif as a template

Use db2ldif -r on the legacy supplier to create the replica init file – ORC will work as well, but it is much slower

Use ldif2db.pl on the legacy consumer to initialize it

Add an entry on the supplier and search for it on the consumer

## Legacy Replication Summary

Used only to assist in migration to 6.0 replication

A legacy consumer replica cannot be a 6.0 replication consumer, but may be a 6.0 replication supplier

Questions?

## Roles (part 1)

Roles are a superset of groups – they do everything groups can do and more

The performance of roles has been optimized in DS 6.0 so that they scale much better than groups, especially static groups

Managed Roles – like static groups

Filtered Roles – like dynamic groups

Nested Roles – can contain other roles – can group roles to create more inclusive roles

## Roles (part 2)

Roles introduces two new operational attributes that greatly enhance management

nsRole – a multi-valued attribute which lists the roles an entry is a member of – the value is the DN of the role definition – this is virtual and cannot be set

nsRoleDN – like nsRole but only lists the managed roles – this is set by the administrator to add the entry to a managed role

These attributes are operational, so they must be explicitly listed in a search e.g.

```
ldapsearch ... "objectclass=*" \* nsRole  
nsRoleDN
```

## Roles (part 3)

Roles are created by creating an entry of the corresponding objectclass (nsManagedRoleDefinition, nsFilteredRoleDefinition, nsNestedRoleDefinition) and its superclasses

Role entries are LDAP subentries and apply to the container in which they are defined e.g. the role

cn=testers,ou=people,dc=example,dc=com  
applies to all child entries of ou=people, but not to dc=example,dc=com or ou=groups

To add an entry to a managed role, add the

nsroledn attribute to the entry, the value being the dn of the managed role definition entry

## Roles (part 4)

To add an entry to a filtered role, just create the filtered role definition, the nsRole attribute shows up automagically

To find all roles which an entry is a member of, just list all values of the nsRole attribute of the entry

To find all members of a particular managed role, just search using a filter of the form “nsroledn=<dn of managed role entry>”

To find all members of a particular filtered role, get the value of the nsRoleFilter attribute from the role definition and use that as the search filter

## Roles (part 5)

Role definitions are LDAP Subentries and have an objectclass of ldapSubentry - LDAP Subentries are special in that they require a special search filter for sub and one level searches

For example, to search for a specific role definition:

```
ldapsearch -s sub -b <base> "(&  
(objectclass=ldapSubentry) (cn=<role name>))"
```

To search for all role definitions:

```
ldapsearch ... "(&(objectclass=ldapsubentry)  
(objectclass=nsRoleDefinition))"
```

## Roles Lab

Create a managed role using managed-role.ldif and add the nsroledn attribute with the managedrole dn value to uid=awhite and uid=jvedder – then search these entries for nsRole and nsRoleDN

Create a filtered role using filtered-role.ldif

Search various entries under ou=people and list the nsrole and nsroledn attributes

Search for role definitions using ldapsearch - remember to use (&(objectclass=ldapsubentry) ...) as the search filter

## Roles Summary

Roles are a superset of and a replacement for groups

Server performance is much better with roles than with groups

New virtual operational attribute – nsRole – the value of this attribute lists roles held by an entry

New operational attribute – nsRoleDN – lists managed roles held by this entry

Role definitions are stored as LDAP Subentries

Questions?

# Class of Service (CoS) (part 1)

Class of Service (CoS) – a virtual attribute service - some attribute values may not be stored with the entry itself - instead, they are generated by CoS logic as the entry is sent to the client application

# Class of Service (CoS) (part 2)

Each CoS specification is comprised of the following two types of entry

CoS Definition Entry - The CoS definition entry identifies the type of CoS you are using - it is stored as an LDAP subentry below the branch at which it is effective

CoS Template Entry – this entry contains a list of the shared attribute values - changes to the template entry attribute values are automatically applied to all the entries sharing the attribute - single CoS might have



more than one template entry associated with it

## Class of Service (CoS) (part 3)

CoS Pointer - identifies the template entry associated with this CoS definition using the template entry's DN value

CoS Indirect - identifies the template entry using the value of one of the target entry's attributes e.g. an indirect CoS might specify the manager attribute of a target entry - the value of the manager attribute is then used to identify the template entry - the target entry's attribute must be single-valued and contain a DN

CoS Classic - identifies the template entry using both the template entry's DN and the value of one of the target entry's attributes

## Class of Service (CoS) (part 4)

The attribute `cosAttribute` in the CoS definition entry provides the name of the attribute for which you want to generate a value - you can specify more than one `cosAttribute` value

`cosAttribute: postalCode`

By default, you can override this value by setting an actual value in the entry – if you do not want to allow this, use the override modifier

`cosAttribute: postalCode override`

This will cause the entry to always use the generated value for `postalCode`

## Class of Service (CoS) (part 5)

You can also create operational attributes by use of the `cosAttribute` operational modifier

`cosAttribute: postalCode operational`

Operational attributes are not subject to schema checking – operational also includes override – the user cannot override CoS operational attributes

You can neither use virtual attributes in a search filter nor index them (yet)

## Class of Service (CoS) (part 6)

Examples of searches that will not work

```
ldapsearch -s sub -b ou=people
```

```
"nsRole=<some role>"
```

This search will return nothing

```
ldapsearch -s sub -b ou=people
```

```
"postalCode=<some value>"
```

if the postalCode value is generated by a CoS scheme, this search will return nothing or even erroneous results

## Class of Service (CoS) Lab (part 1)

Create a cosPointer definition and template to add the value of the st attribute to ou=people

children – use cos-pointer.ldif as a template – use ldapsearch to verify the presence of the attribute and value

Change the value of st in the template entry and use ldapsearch to verify the changed value in a real entry

Add the “override” modifier to the cosAttribute specification, try to change the value in a real entry using ldapmodify, and use ldapsearch to verify the value did not change

## Class of Service (CoS) Lab (part 2)

Add another cosAttribute, “foo”, and make it operational – set the value of foo in the template attribute to bar – use ldapsearch to verify the presence of the attribute and value

Attempt to modify the foo attribute in a person entry and see what happens

Use ldapsearch –s sub –b ou=people with

various search filters using generated attributes e.g. (nsRole=\*) or (postalCode=90125) to see what happens

## Class of Service (CoS) Summary

CoS is a generic virtual attribute interface

What is a virtual attribute?

A CoS definition is comprised of two entries

What are the entries? What is the purpose of each entry?

You cannot use a virtual attribute in a search filter

What is an example of a search that will not work?

Questions?

# Advanced CoS (part 1)

cosPriority – the only required attribute in the cosTemplate objectclass – it is possible for CoS schemes to compete to provide values – the cosPriority attribute allows specifying which value from which template “wins”

The value of cosPriority goes from 0 (zero) to the maximum integer value (2 billion) – 0 (zero) is the highest value

Templates with higher priorities will be favored over and to the exclusion of templates with lower priorities

# Advanced CoS (part 2)

Templates which do not have a cosPriority attribute are considered to have no priority

In the case where the value cannot be determined from the priority, the result is undefined, but does not exclude the possibility that a value will be returned, however arbitrarily

chosen

Templates closer to the entry have higher priority than templates further away - e.g. templates in the parent's subentry override templates further up the tree - this overrides any cosPriority setting

## Advanced CoS (part 3)

CoS Indirect are indirect because they do not specify the DN of the template entry, they specify an attribute in the target entry (e.g. some person entry under ou=people) which contains the DN of the template entry

The attribute cosIndirectSpecifier is used in the CoS definition entry to specify which attribute in the target entry contains the DN of the template entry

You do not need an entry of objectclass cosTemplate for the template entry – any entry may be an indirect template entry

## Advanced CoS (part 4)

CoS Classic – combines features of both CoS Pointer and CoS Indirect

The CoS definition entry contains the key attributes:

cosTemplateDN - the DN of the parent entry under which the template entry is found

cosSpecifier - names the attribute which holds the value which is used to form the RDN of the template entry – this entry is the child of the cosTemplateDN

## Advanced CoS (part 4)

CoS Classic Example

dn: cn=cosClassicDefinition,ou=people,...

cosAttribute: postalCode <- attr. to generate

cosSpecifier: l <- attribute holding RDN

cosTemplateDN:



cn=cosTemplates,ou=people,...

dn: cn=Sunnyvale,cn=cosTemplates,...  
postalCode: 90125 <- generated value

dn: uid=afarmer,ou=people,...  
l: Sunnyvale <- value for RDN above  
postalCode: 90125 <- value is generated

## Advanced CoS Lab

Using the CoS Pointer example cos-pointer.ldif, create another CoS scheme to generate the same attribute with a different value – which value shows up when searched?

Add the cosPriority attribute to one of the templates – does the priority value show up?

Create a CoS Indirect scheme using the file cos-indirect.ldif as a template – use ldapsearch to verify the generated attribute is present

Create a CoS Classic scheme using cos-classic.ldif – verify with ldapsearch

# Advanced CoS Summary

Three different types of CoS definitions

What are they? How are they different?

Two different CoS definitions can generate the same attribute on the same entry

Which value “wins”?

How do you control which value “wins”?

How do you prevent the user from overriding a generated value?

Questions?

## Role Based Attributes (part 1)

CoS Classic can be used with the nsRole attribute as the cosSpecifier

This provides the ability to generate different values for attributes based on the role

membership of the entry e.g. give paying subscribers a 25MB mailbox quota but only give free subscribers a 10MB mailbox quota

In this case, the RDN value of the cosTemplate entry will be a DN – it looks strange but it works

## Role Based Attributes (part 2)

Here are our CoS definition and CoS template – assumes there is a paidguys role defined

dn: cn=generateMailQuota,ou=people,...

objectclass: cosClassicDefinitioncosSpecifier:  
nsRole

cosAttribute: mailQuota override

cosTemplateDN: cn=cosTemplates,ou=people,  
...

dn: cn="cn=paidguys, ou=people, dc=example,  
dc=com", cn=cosTemplates, ou=people, ...

mailQuota: 10 000 000

## Role Based Attributes (part 3)

And here is our entry with the generated mailQuota

dn: uid=awhite,ou=people,...

nsRole: cn=paidguys,ou=people,...

mailQuota: 10 000 000

The override qualifier in the CoS definition assures that the user cannot change the mailQuota

## Role Based Attributes Lab

Create and add the roles, add the users to the roles, and create the CoS scheme using the role-based-attribute.ldif file

Create another CoS template based on a different value of the cosAttribute used in the previous exercise

# Role Based Attributes Summary

Roles and CoS work together to provide a very powerful entry management capability

Can you suggest some other applications of role based attributes?

Questions?

## Bind DN Based Resource Limits (part 1)

There are 4 new operational attributes which can be set on user entries to limit or increase access to server resources

Each of these corresponds to the global version in cn=config

If not set, the default value is the global version

The directory manager has no limits

nssizelimit – corresponds to nsslapd-sizelimit - specifies the maximum number of entries to return from a search operation. If this limit is reached, ns-slapd returns any entries it has located that match the search request, as well as an exceeded size limit error

## Bind DN Based Resource Limits (part 2)

nstimelimit – corresponds to nsslapd-timelimit - Specifies the maximum number of seconds allocated for a search request. If this limit is reached, the Directory Server returns any entries it has located that match the search request, as well as an exceeded time limit error

nsidletimeout –corresponds to nsslapd-idletimeout - Specifies the amount of time in seconds after which an idle LDAP client connection is closed by the server. A value of 0 indicates that the server will never close idle

connections

## Bind DN Based Resource Limits (part 3)

nslookthroughlimit – corresponds to nsslapd-lookthrough limit in the database config entry - specifies the maximum number of entries that the Directory Server will check when examining candidate entries in response to a search request – this differs from size limit in that size limit only controls what is sent to the client – the lookthroughlimit controls what entries the server will internally search looking for matches to the client request – it is more restrictive than size limit

## Bind DN Based Resource Limits (part 4)

These resource limits can be used in

conjunction with CoS (and possibly Roles) to generate these operational attributes on certain entries e.g. create an Administrator role, and create a CoS scheme that generates these attributes with very high values on only those entries in the Administrator role

## Bind DN Based Resource Limits Lab

Use the file `binddn-resource-limits.ldif` to set the size limit for `uid=awhite` to 5 – bind as `awhite` and attempt a subtree search of `ou=people` – notice the results

Set the `nslookthroughlimit` to 5 – bind and attempt the same search – notice the difference

## Bind DN Based Resource Limits Summary



Can set resource limits for searches based on who is binding to the directory

Can use in conjunction with roles and CoS to create administrative roles with more privileges

Questions?

## Account Inactivation (part 1)

nsaccountlock - a new operational attribute which can be used to inactivate an account e.g. a person who leaves the company

If the nsaccountlock attribute is present and has the value of true, the user will not be able to bind to the directory server

There are three perl scripts which can be found in the instance directory <root>/slapd-<name>

ns-inactivate.pl – make a user or role inactive

ns-activate.pl – make a user or role active

ns-accountstatus.pl – check the status of a user or role

## Account Inactivation (part 2)

You should always use the perl scripts or the Account Inactivation user interface in the console to inactivate/activate accounts - if you manually set the attribute, you will not be able to use the scripts or the console to manage this feature

## Account Inactivation Lab

Run the account perl scripts to get usage

Use ns-inactivate.pl to inactivate the uid=awhite account – attempt to bind as uid=awhite and see what happens

Use ns-accountstatus.pl to get the status of uid=awhite

Use ns-activate.pl to re-activate uid=awhite – attempt to bind as uid=awhite and see what happens

Use ns-accountstatus.pl again

## Account Inactivation Summary

Provides a standard supported way of user lifetime management, as opposed to ad hoc methods used in 4.x and earlier releases

You should always use either the command line scripts or the GUI to manage account inactivation

Questions?

## New Authentication Features (part 1)

DS 6.0 supports SASL (Simple Authentication and Security Layer) to avoid sending clear text

passwords over the wire

SASL is defined in RFCs 2222 and 2444

<http://www.ietf.org/rfc/rfc2222.txt>

<http://www.ietf.org/rfc/rfc2444.txt>

DS 6.0 supports the mandatory LDAP authentication mechanism: SASL DIGEST-MD5

In order to use SASL with 6.0, the passwords must be stored in cleartext – this will be fixed in 6.next

## New Authentication Features (part 2)

New plugin type: pwdstoragescheme

All of the old 4.x and earlier password storage schemes are supported now as plugins

New types: MTA-MD5 and DES – DES is only used internally, not exposed to users – MD5 is only for MS legacy support – SSHA is the

## default

Advanced users can write their own plugins to hash/encrypt passwords

These plugins may be found in the configuration under cn=Password Storage Schemes, cn=plugins, cn=config – each scheme is a separate child entry of this entry e.g. cn=SSHA

# New Authentication Features (part 3)

StartTLS – this feature gives clients the ability to start a secure (SSL) session on the non-secure port – TLS (not specific to LDAP) is described in <http://www.ietf.org/rfc/rfc2246.txt>

StartTLS is available in 6.0 on all Unix platforms

StartTLS is not available on NT or Win2000 for 6.0 – will be available in a future release of 6.x

The server and client must be configured to use SSL and both must support StartTLS

## New Authentication Lab

Use `ldapsearch (nsslapd-pluginType=pwdstorageScheme)` to list all of the password plugins

Use `ldapsearch` on the root DSE to list the supported SASL mechanisms

## New Authentication Summary

The main benefit of SASL is to allow secure authentication to the directory without using SSL (no clear text passwords sent over the wire)

Password storage must be in clear text to use SASL with DS 6.0 – fixed in 6.next

New password storage method – MD5 – for

legacy MS support only – default is SSHA  
Password storage methods are pluggable  
StartTLS on Unix – SSL without SSL port  
Questions?

## New ACI Features (part 1)

Performance has been greatly improved – DS 6.0 has been tested with 50k ACIs

There is a new subject keyword: roledn – this works the same way as groupdn i.e. it grants/denies access if the bind DN is a member of the role specified by the dn

Virtual attributes may not be used in target filters e.g. (nsrole=<some role>) but may be used otherwise e.g. (targetattr=postalCode) or (userattr=manager#USERDN)

Ability to set ACIs on the root DSE entry

Macro ACIs support large hosted environments

## New ACI Features (part 2)

New target keyword: targattrfilters – this allows the ability to grant or deny access to add or delete particular attribute values

For example consider the following attribute filter:

```
(targattrfilters="add=nsroleDN:(!  
(nsRoleDN=cn=superAdmin))&& tel:  
(tel=123*))
```

This filter can be used to allow users to add any role (nsRoleDN attribute) to their own entry, except the superAdmin role. It also allows to add a telephone number with a 123 prefix.

## New ACI Lab

Use the file roledn-aci.ldif as an example of using the roledn bind rule keyword

Use the file targattrfilters.ldif as an example of



using the new targattrfilters keyword

## New ACI Summary

ACI performance is improved

New keywords – roledn, targattrfilters

Can you give an example of using each one?

How is targattrfilters different from targetattr?

Be careful when using virtual attributes

Give an example of safe usage and unsafe usage?

Questions?

## ACI – userattr (part 1)

The userattr keyword supersedes the userdnattr and groupdnattr keywords

The `userattr` keyword can be used to specify which attribute values must match between the entry used to bind and the targeted entry. You can specify:

- A user DN – works like `userdnattr`

- A group DN – works like `groupdnattr`

- A role DN

- An LDAP filter, in an LDAP URL

- Any attribute type

## ACI – `userattr` (part 2)

The LDIF syntax of the `userattr` keyword is `userattr = "attrName#bindType"` or, if you are using an attribute type that requires a value other than a user DN, group DN, role DN or an LDAP filter, `userattr = "attrName#attrValue"`

- `attrName` is the name of the attribute used for value matching

- `bindType` is one of `USERDN`, `GROUPDN`,

## ROLEDN, LDAPURL

attrValue is any string representing an attribute value

## ACI – userattr (part 3)

The following example grants a manager full access to his or her employees' entries, assuming the manager attribute in the employee entry is the full DN of the manager entry:

```
aci: (target="ldap:///dc=example,dc=com")  
(targetattr=*) (version 3.0; acl "manager-write";  
allow (all) userattr = "manager#USERDN";)
```

The GROUPODN and ROLEDN work in a similar way – use userattr = “ldap:///suffix?attr;#GROUPODN” for better performance with static groups and managed roles

## ACI – userattr (part 4)

An example with the LDAPURL keyword  
userattr = "myfilter#LDAPURL"

The bind rule is evaluated to be true if the bind DN matches the DN value returned by a search with the filter specified in the myfilter attribute of the targeted entry, and the value of myfilter is a valid LDAP search filter

An example of the userattr keyword associated with a bind based on an arbitrary attribute value

userattr = "favoriteDrink#Coke"

The bind rule is evaluated to be true if the bind DN and the target DN include the favoriteDrink attribute with a value of Coke

## ACI – userattr (part 5)

When you use the userattr keyword to associate the entry used to bind with the target entry, the ACI applies only to the target specified and not to the entries below it

In some circumstances, you might want to

extend the application of the ACI several levels below the targeted entry. This is possible by using the parent keyword, and specifying the number of levels below the target that should inherit the ACI

## ACI – userattr (part 6)

Syntax:

```
userattr = "parent  
[inheritance_level].attrName#bindType"
```

`inheritance_level` - a comma separated list that indicates how many levels below the target will inherit the ACI. You can include five levels [0,1,2,3,4] below the targeted entry; zero (0) indicates the targeted entry

`attrName` is the attribute targeted by the `userattr` keyword

`bindType` can be one of USERDN, GROUPDN, ROLEDN, LDAPURL, or an arbitrary attribute value

## ACI – userattr (part 7)

The following ACI would grant access to the DN specified by the owner attribute of the target entry to both the target entry and its one level scope children

```
aci: (targetattr="*") (version 3.0; aci "profiles  
access"; allow(read,search) userattr="parent  
[0,1].owner#USERDN";)
```

## ACI – userattr (part 8)

A parent[] keyword in an aci never grants ADD access at level 0. This is because "level 0" means "the entry itself" and so if we allowed add access you would be granting access based on the value of attributes defined by the user - which is not secure

## ACI - userattr Lab

Use the file `userattr-userdn.ldif` as an example of the `userattr` keyword with `#USERDN`

Add a child entry (e.g. `cn=profiles`) to the entry used as the target in the previous example, and change the `aci` used in the previous example to use the `parent[0,1]` modifier - make sure the subject can modify both the target entry and the `cn=profiles` child of that target entry

## ACI – userattr Summary

`userattr` supersedes `userdnattr` and `groupdnattr` and adds even more functionality

Can you give an example of `userdnattr` and `groupdnattr` and how to do the same thing with `userattr`?

Give an example of using both the `#LDAPURL` and `#someattribute` with `userattr`

Give an example of using the `parent[]` modifier

Questions?

## Macro ACIs (part 1)

Macro ACIs - Macros are placeholders that are used to represent a DN, or a portion of a DN in an ACI

You can use a macro to represent a DN in the target portion of the ACI, or in the bind rule portion, or both

In practice, when the Directory Server gets an incoming LDAP operation, the ACI macros are matched against the resource targeted by the LDAP operation. If there is a match, the macro is replaced by the value of the DN of the targeted resource. The Directory Server then evaluates the ACI normally.

## Macro ACIs (part 2)

Macro ACIs are very useful in situations where



there are large numbers of very similar ACIs

## Terminology

Target – the entry or subtree to which the access control applies e.g.

(target="ldap:///ou=People,dc=example,dc=co  
applies to ou=people and all children

Subject – the bind entity requesting access  
e.g.

(userdn="ldap:///uid=awhite,ou=People,dc=ex

## Macro ACIs (part 3)

Macro ACI Syntax - Macro ACIs include the following types of expressions to replace a DN or part of a DN in a subject or target

(\$dn) – exact DN match - replaced by the matching part of the resource targeted in a request

[\$dn] – sub RDN match – the DN of the targeted resource is examined several times, each time dropping the leftmost RDN

component, until a match is found

(\$attr.attrName) – used in the subject – evaluates to the value of the attribute named by attrName in the target

## Macro ACIs (part 4)

This table shows in what parts of the ACI you can use the macros

Used In

Macro

userdn, roledn, groupdn, userattr

(\$attr.attrName)

targetfilter, userdn, roledn, groupdn, userattr

[\$dn]

target, targetfilter, userdn, roledn, groupdn, userattr

(\$dn)

## Macro ACIs (part 5)

When using any macro, you always need a target definition that contains the (\$dn) macro

You can combine the (\$dn) macro and the (\$attr.attrName) macro

## Macro ACIs (part 6)

```
aci: (target="ldap:///ou=Groups, ($dn),  
dc=example, dc=com") (targetattr="*")(version  
3.0; acl "Domain access"; allow (read,search)  
groupdn="ldap:///cn=DomainAdmins,ou=Groups  
[$dn],dc=example,dc=com";)
```

This aci grants access to any member of any cn=DomainAdmins group in any subtree to the ou=Groups subtree under the same DN

## Macro ACI Lab

Use the file macro-aci.ldif as a template to create a Macro ACI for a sample hosting environment – attempt to bind and search using various user ids

Change the [\$dn] to (\$dn) and see how it affects access

## Macro ACI Summary

Macro ACIs provide a way to easily and quickly set up access control for a large number of very similar tree layouts (e.g. in an ISP hosting environment)

Must use the target keyword with Macro ACIs

Use (\$dn) and [\$dn] to match arbitrary portions of the bind and target DN – use (\$attr.) to match specific attributes in the DNs

Questions?

# Legacy Changelog

DS 6.0 has a Legacy Changelog Plugin which supports the 4.x style changelog - cn=Retro Changelog Plugin,cn=plugins,cn=config

This feature is only to support legacy applications, primarily MetaDirectory – it is off by default

A replica having a 4.x style changelog cannot be a replication supplier

Changelog configuration is stored in the plugin entry named above – the changelog suffix is hardcoded to cn=changelog

The attributes nsslapd-changelogmaxage and nsslapd-changelogdir work as in DS 4.x

## Legacy Changelog Lab

Find and enable the plugin in dse.ldif

Load an ldif file using ldapmodify into the suffix to generate changes in the changelog

Use ldapsearch to query the changelog suffix  
cn=changelog - remember that the change  
entries are child entries of cn=changelog

## Legacy Changelog Summary

The legacy changelog should only be used to  
support MetaDirectory or other legacy client  
applications

A server using legacy changelog cannot be  
replication supplier

Can you describe a situation in which the  
legacy changelog can be used with 6.0  
replication?

Questions?

## Migration from DS 4.x and 5.x to DS 6.0

The perl script <server

root>/bin/slapd/admin/bin/migrateInstance6 is used to migrate 4.x and 5.x server instances to 6.0

To use

```
cd <server root>/bin/slapd/admin/bin  
./perl migrateInstance6
```

This will give extensive usage information if run with no arguments

The best strategy is to create an "empty" instance of a 6.0 server - use a suffix which does not exist on the instance to migrate e.g. o=notused

## Migration Lab

Run the migrateInstance6 script with no arguments to see usage

Run the migrateInstance6 script to migrate a DS 4.x instance to 6.0

# Migration Summary

Migration from 4.x and 5.x to 6.0 – migration from 3.x and earlier is not supported

Questions?

## Console

The 6.0 console is very similar to the 4.x console

The console fully supports the new features of 6.0

Use the Directory Browser to select entries, then use the click right menu or Object menu to see new features

Many improvements

Database configuration – including Import, Export, etc.

Replication Configuration

ACI editor



# Console Lab

Use startconsole, then bring up the directory console

Look at the Tasks tab – Import and Export buttons

Look at the Configuration tab – browse the layout of nodes in the Database and Replication Trees – look at the menu options for each

Look at the Directory tab – select various entries and look at the menu options for each one – bring up the Roles and CoS windows

Edit a user entry

## Console Summary

Questions?

# Miscellaneous Documentation

Administrator's Guide, Deployment Guide, Installation Guide, Installation Notes, Release Notes, Plugin API, Schema Reference Guide

<http://enterprise.netscape.com/docs>

Public Technotes (4.x)

<http://help.netscape.com/browse/dirsrv4x.html>

Internal Technotes by Sustaining Engineering

<http://ledzep.mcom.com/ds/>

## Miscellaneous Documentation (cont.)

"Understanding and Deploying LDAP Directory Services", by Tim Howes, Mark C. Smith, and Gordon Good

[http://www.amazon.com/exec/obidos/ASIN/157-1/ref=aps\\_sr\\_b\\_1\\_1/002-5911781-6524225](http://www.amazon.com/exec/obidos/ASIN/157-1/ref=aps_sr_b_1_1/002-5911781-6524225)

"Ldap : Programming Directory-Enabled Applications With Lightweight Directory Access Protocol", by Tim Howes and Mark C. Smith

<http://www.amazon.com/exec/obidos/ASIN/157-5911781-6524225>

"LDAP Programming with Java", by Rob Weltman and Tony Dahbura

<http://www.amazon.com/exec/obidos/ASIN/020-5911781-6524225>

File 347:JAPIO Nov 1976-2003/Nov(Updated 040308)  
(c) 2004 JPO & JAPIO  
File 350:Derwent WPIX 1963-2004/UD,UM &UP=200419  
(c) 2004 Thomson Derwent  
File 348:EUROPEAN PATENTS 1978-2004/Mar W03  
(c) 2004 European Patent Office  
File 349:PCT FULLTEXT 1979-2002/UB=20040325,UT=20040318  
(c) 2004 WIPO/Univentio

Set	Items	Description
S1	7	AU='MERRELLS J':AU='MERRELLS JOHN'
S2	5	AU='NATKOVICH O'
S3	26	AU='GOOD G':AU='GOOD G W'
S4	345	AU='SHAH P':AU='SHAH P V'
S5	2	AU='SHAH PINAKIN M'
S6	259	AU='SMITH M'
S7	97	AU='SMITH M C'
S8	38	AU='SMITH MARK'
S9	1	AU='SMITH MARK C'
S10	7	S1 AND S2:S9
S11	5	S10 AND REPLICA?

11/9/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015514682 \*\*Image available\*\*  
WPI Acc No: 2003-576829/200354  
XRPX Acc No: N03-458519

Directory server e.g. iPlanet directory server includes pluggable services which manage replication of data from supplier server to consumer server, using replica update vector

Patent Assignee: SUN MICROSYSTEMS INC (SUNM ); GOOD G (GOOD-I); MERRELLS J (MERR-I); NATKOVICH O (NATK-I); SHAH P (SHAH-I); SMITH M C (SMIT-I)  
Inventor: GOOD G ; MERRELLS J ; NATKOVICH O ; SHAH P ; SMITH M C  
Number of Countries: 002 Number of Patents: 002  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030093440	A1	20030515	US 2001993937	A	20011106	200354 B
GB 2388933	A	20031126	GB 200225915	A	20021106	200378

Priority Applications (No Type Date): US 2001993937 A 20011106

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
-----------	------	--------	----------	--------------

US 20030093440	A1	13	G06F-012/00	
----------------	----	----	-------------	--

GB 2388933	A		G06F-017/30	
------------	---	--	-------------	--

Abstract (Basic): US 20030093440 A1

NOVELTY - The directory server includes pluggable services which manage replication of data from a supplier server to consumer server, using replica update vector (RUV) which determines minimum set of updates necessary to synchronize both supplier and consumer servers.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) method of updating replica update vector; and

(2) apparatus for updating replica update vector.

USE - Directory server e.g. iPlanet directory server, for intranet or extranet system.

ADVANTAGE - RUV allows changes to multiple servers to be done quickly, reducing processing time and consumption. RUV is stored in stable storage to prevent information which may be lost due to server reboot and crashes.

DESCRIPTION OF DRAWING(S) - The figure shows the flow diagram explaining replication process.

pp; 13 DwgNo 7/7

Title Terms: DIRECTORY; SERVE; DIRECTORY; SERVE; PLUG; SERVICE; MANAGE;  
REPLICA ; DATA; SUPPLY; SERVE; CONSUME; SERVE; REPLICA ; UPDATE; VECTOR  
Derwent Class: T01

International Patent Class (Main): G06F-012/00; G06F-017/  
File Segment: EPI  
Manual Codes (EPI/S-X): T01-N02A3C; T01-N02B1A

11/9/2 (Item 2 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015505490 \*\*Image available\*\*  
WPI Acc No: 2003-567637/200353  
XRPX Acc No: N03-451301

Update resolving method, involves creating ordering of operations using  
generated change sequence number, and computing new state for entry from  
extracted state information and operation associated with entry  
Patent Assignee: SUN MICROSYSTEMS INC (SUNM ); GOOD G (GOOD-I); MEGGINSON  
R (MEGG-I); MERRELLS J (MERR-I); NATKOVICH O (NATK-I); SMITH M C (SMIT-I)  
Inventor: GOOD G ; MEGGINSON R; MERRELLS J ; NATKOVICH O ; SMITH M C  
Number of Countries: 002 Number of Patents: 002  
Patent Family:  
Patent No Kind Date Applicat No Kind Date Week  
US 20030088615 A1 20030508 US 2001993938 A 20011106 200353 B  
GB 2386985 A 20031001 GB 200225916 A 20021106 200373

Priority Applications (No Type Date): US 2001993938 A 20011106

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030088615	A1		17	G06F-017/60	
GB 2386985	A			G06F-017/30	

Abstract (Basic): US 20030088615 A1

NOVELTY - The method involves generating a change sequence number,  
and creating a total ordering of operations by using generated change  
sequence number. State information is extracted from an entry  
associated with an operation from the total ordering, and a new state  
is computed for entry using the extracted information and the operation  
associated with the entry.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the  
following:

- (a) a directory server
  - (b) an apparatus for resolving updates in a directory server.
- USE - Used for resolving updates in a directory server.

ADVANTAGE - The directory server holds a master copy of the  
information and automatically copy any updates to all replicas ,  
thereby enabling the provision of highly available directory service  
and the geographically distribution of data. The method does not manage  
multiple instance of same information and reduce hardware and personnel  
costs. The system and method allows the application programmers to  
operate in stable and consistent environments.

DESCRIPTION OF DRAWING(S) - The drawing shows process to perform  
update resolution.

pp; 17 DwgNo 7/8

Title Terms: UPDATE; RESOLUTION; METHOD; ORDER; OPERATE; GENERATE; CHANGE;  
SEQUENCE; NUMBER; COMPUTATION; NEW; STATE; ENTER; EXTRACT; STATE;  
INFORMATION; OPERATE; ASSOCIATE; ENTER

Derwent Class: T01

International Patent Class (Main): G06F-017/30; G06F-017/60

International Patent Class (Additional): G06F-015/16

File Segment: EPI

Manual Codes (EPI/S-X): T01-N02B2

11/9/3 (Item 3 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015505480 \*\*Image available\*\*  
WPI Acc No: 2003-567627/200353  
XRPX Acc No: N03-451291

Directory server for intranet, has consumer to communicate with supplier server and number of pluggable services to manage replication of data using change sequence number

Patent Assignee: GOOD G (GOOD-I); MERRELLS J (MERR-I); NATKOVICH O (NATK-I); POITOU L (POIT-I); SHAH P (SHAH-I); SMITH M C (SMIT-I)

Inventor: GOOD G ; MERRELLS J ; NATKOVICH O ; POITOU L ; SHAH P ; SMITH M C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030088589	A1	20030508	US 2001993939	A	20011106	200353 B

Priority Applications (No Type Date): US 2001993939 A 20011106

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030088589	A1	11	G06F-012/00	

Abstract (Basic): US 20030088589 A1

NOVELTY - The server has a consumer server that communicates with a supplier server. A number of pluggable services manage replication of data contained within the directory server. A change sequence number is used to determine ordering of operations performed on the consumer server. The replication of data is managed using the change sequence number.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of generating a change sequence number.

USE - Used for intranet or extranet while integrating with existing systems.

ADVANTAGE - The change of password made in one directory is automatically replicated in other directories. The server can be implemented virtually on any type of computer regardless of the traditional platform being used.

DESCRIPTION OF DRAWING(S) - The drawing shows a block diagram of iPlanet Internet Service Development Platform.

pp; 11 DwgNo 6/6

Title Terms: DIRECTORY; SERVE; CONSUME; COMMUNICATE; SUPPLY; SERVE; NUMBER; PLUG; SERVICE; MANAGE; REPLICA ; DATA; CHANGE; SEQUENCE; NUMBER

Derwent Class: T01

International Patent Class (Main): G06F-012/00

File Segment: EPI

Manual Codes (EPI/S-X): T01-N01A2; T01-N02A3C

11/9/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015505479 \*\*Image available\*\*

WPI Acc No: 2003-567626/200353

XRPX Acc No: N03-451290

Directory server for managing multiple databases, has pluggable surfaces that manage replication of data contained within directory server from supplier server to consumer server

Patent Assignee: SUN MICROSYSTEMS INC (SUNM ); GOOD G (GOOD-I); MEGGINSON R (MEGG-I); MERRELLS J (MERR-I); NATKOVICH O (NATK-I); POITOU L (POIT-I); SMITH M C (SMIT-I)

Inventor: GOOD G ; MEGGINSON R; MERRELLS J ; NATKOVICH O ; POITOU L; SMITH M C

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030088587	A1	20030508	US 2001993940	A	20011106	200353 B
GB 2386216	A	20030910	GB 200225914	A	20021106	200360

Priority Applications (No Type Date): US 2001993940 A 20011106

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030088587	A1	13	G06F-017/30	

Abstract (Basic): US 20030088587 A1

NOVELTY - The directory server has a consumer server that communicates with a supplier server. Pluggable services manage the **replication** of data contained within the directory server from the supplier server to the consumer server. A change log is maintained on the consumer server of the data that is **replicated** to the consumer server.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for **replicating** data in a directory server that has a supplier and a consumer server.

USE - Used for storing and managing multiple databases.

ADVANTAGE - The server manages databases having the same information and provides additional functionality and control for each operation. The pluggable services allow construction of **replication** environments that function even in the face of unavailability of an updateable data.

DESCRIPTION OF DRAWING(S) - The drawing shows a block diagram of the **replication** architecture of the directory server.

pp; 13 DwgNo 7/7

Title Terms: DIRECTORY; SERVE; MANAGE; MULTIPLE; PLUG; SURFACE; MANAGE;

**REPLICA** ; DATA; CONTAIN; DIRECTORY; SERVE; SUPPLY; SERVE; CONSUME; SERVE

Derwent Class: T01

International Patent Class (Main): G06F-017/30; G06F-017/60

International Patent Class (Additional): G06F-011/14

File Segment: EPI

Manual Codes (EPI/S-X): T01-J05B4M; T01-N02A3C

11/5/5 (Item 1 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01613570

Directory server software architecture

Softwarearchitektur fur Verzeichnisanbieter

Architecture software pour serveur de repertoire

PATENT ASSIGNEE:

Sun Microsystems, Inc., (2616592), 4150 Network Circle, Santa Clara, California 95054, (US), (Applicant designated States: all)

INVENTOR:

Wahl, Mark F., 10603 Valley Vista, 78737, Austin, (US)

**Merrells, John** , 241 Heartwood Lane, 94041, Mountain View, (US)

**Smith, Mark C.** , 447 Marlpool Drive, Saline, MI 48176-1519, (US)

LEGAL REPRESENTATIVE:

Weihs, Bruno et al (94361), Rosenthal & Osha S.A.R.L. 121, avenue des Champs Elysees, 75008 Paris, (FR)

PATENT (CC, No, Kind, Date): EP 1333389 A2 030806 (Basic)

APPLICATION (CC, No, Date): EP 2002102528 021104;

PRIORITY (CC, No, Date): US 4349 011102

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G06F-017/30

ABSTRACT EP 1333389 A2

A directory server system includes a front-end portion adapted to connect to a client computer, a back-end portion with an embedded database, and a mapping tree portion. The front-end portion includes a core protocol connection responder configured to access information stored in the back-end portion, wherein the back-end portion is maintained in a logical representation by a directory information tree. The mapping tree portion identifies a location of information stored in the back-end portion in response to a request sent by the client computer.

ABSTRACT WORD COUNT: 85

NOTE:

Figure number on first page: 8

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 030806 A2 Published application without search report

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
----------------	----------	--------	------------

CLAIMS A	(English)	200332	1036
----------	-----------	--------	------

SPEC A	(English)	200332	5574
--------	-----------	--------	------

Total word count - document A	6610
-------------------------------	------

Total word count - document B	0
-------------------------------	---

Total word count - documents A + B	6610
------------------------------------	------

?logoff hold



File 347:JAPIO Nov 1976-2003/Nov(Updated 040308)

(c) 2004 JPO & JAPIO

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200419

(c) 2004 Thomson Derwent

Set	Items	Description
S1	8	REPLICA?(1W) (UPDAT???? ? OR UP() (DATE? ? OR DATING?)) (1W)V- ECTOR? OR RUV OR RUVS
S2	254847	SERVER? ? OR HOST? ? OR MAINFRAME? ? OR MAIN()FRAME? ? OR - RAS OR MAILSERVER? OR WEBSEVER? OR FILESERVER? OR HTTPSERVER?
S3	3660	(MANY OR MULTI OR SEVERAL OR PLURALIT? OR MULTIPLE OR NUME- ROUS OR DIFFERENT OR ACROSS OR MULTITUD? OR PLURIF? OR SECOND OR BOTH) (1W)S2
S4	12579	(BETWEEN OR VARIOUS OR VARIETY OR GROUP? ? OR CLUSTER? OR - NUMBER OR PAIR??? ? OR TRIO OR SET? ? OR NETWORK? ? OR CHAIN? ?) (1W)S2
S5	1592	(SERIES OR ANOTHER OR TWO OR THREE OR COLLECTION? OR DUAL - OR RANGE) (1W)S2
S6	9045	(CONSUMER? ? OR USER? ? OR BUYER? ? OR PATRON? ? OR PURCHA- SER? OR CUSTOMER? OR SHOPPER? OR CLIENT? ? OR ESHOPPER? OR RE- QUEST?R? ? OR MEMBER? ?) (1W)S2
S7	1003	(SUPPLIER? OR SELLER? OR DEALER? OR VEND?R? ? OR BROKER? ? OR TRANDER? ? OR MERCHANT? ? OR AGENT? ? OR RESELLER? OR DIST- RIBUT?R? ? OR RETAILER? OR MANUFACTURER?) (1W)S2
S8	34	TRADER? ?(1W)S2
S9	237369	SYNC???? ? OR HOTSYNC? OR DATASYNC? OR SYNCHRONIS??????? ? - OR SYNCHRONIZ??????? ?
S10	82345	UPDAT???? ? OR UP() (DATE? ? OR DATING?)
S11	2225	S3:S8 AND S9:S10
S12	1	S1 AND S11

? t12/9

12/9/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015514682 \*\*Image available\*\*

WPI Acc No: 2003-576829/200354

XRPX Acc No: N03-458519

Directory server e.g. iPlanet directory server includes pluggable  
services which manage replication of data from supplier server to  
consumer server, using replica update vector  
Patent Assignee: SUN MICROSYSTEMS INC (SUNM ); GOOD G (GOOD-I); MERRELLS J  
(MERR-I); NATKOVICH O (NATK-I); SHAH P (SHAH-I); SMITH M C (SMIT-I)  
Inventor: GOOD G; MERRELLS J; NATKOVICH O; SHAH P; SMITH M C  
Number of Countries: 002 Number of Patents: 002  
Patent Family:  
Patent No Kind Date Applicat No Kind Date Week  
US 20030093440 A1 20030515 US 2001993937 A 20011106 200354 B  
GB 2388933 A 20031126 GB 200225915 A 20021106 200378

Priority Applications (No Type Date): US 2001993937 A 20011106

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20030093440 A1 13 G06F-012/00

GB 2388933 A G06F-017/30

Abstract (Basic): US 20030093440 A1

NOVELTY - The directory server includes pluggable services which  
manage replication of data from a supplier server to consumer  
server, using replica update vector ( RUV ) which determines  
minimum set of updates necessary to synchronize both supplier and

**consumer servers .**

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) method of updating replica update vector ; and
- (2) apparatus for updating replica update vector .

USE - Directory server e.g. iPlanet directory server, for intranet or extranet system.

ADVANTAGE - RUV allows changes to multiple servers to be done quickly, reducing processing time and consumption. RUV is stored in stable storage to prevent information which may be lost due to server reboot and crashes.

DESCRIPTION OF DRAWING(S) - The figure shows the flow diagram explaining replication process.

pp; 13 DwgNo 7/7

Title Terms: DIRECTORY; SERVE; DIRECTORY; SERVE; PLUG; SERVICE; MANAGE;  
REPLICA; DATA; SUPPLY; SERVE; CONSUME; SERVE; REPLICA; **UPDATE** ; VECTOR

Derwent Class: T01

International Patent Class (Main): G06F-012/00; G06F-017/30

File Segment: EPI

Manual Codes (EPI/S-X): T01-N02A3C; T01-N02B1A

?

Set	Items	Description
S1	8	REPLICA?(1W)(UPDAT???? ? OR UP()(DATE? ? OR DATING?))(1W)V- ECTOR? OR RUV OR RUVS
S2	254847	SERVER? ? OR HOST? ? OR MAINFRAME? ? OR MAIN()FRAME? ? OR - RAS OR MAILSERVER? OR WEBSERVER? OR FILESERVER? OR HTTPSERVER?
S3	3660	(MANY OR MULTI OR SEVERAL OR PLURALIT? OR MULTIPLE OR NUME- ROUS OR DIFFERENT OR ACROSS OR MULTITUD? OR PLURIF? OR SECOND OR BOTH)(1W)S2
S4	12579	(BETWEEN OR VARIOUS OR VARIETY OR GROUP? ? OR CLUSTER? OR - NUMBER OR PAIR??? ? OR TRIO OR SET? ? OR NETWORK? ? OR CHAIN? ?)(1W)S2
S5	1592	(SERIES OR ANOTHER OR TWO OR THREE OR COLLECTION? OR DUAL - OR RANGE)(1W)S2
S6	9045	(CONSUMER? ? OR USER? ? OR BUYER? ? OR PATRON? ? OR PURCHA- SER? OR CUSTOMER? OR SHOPPER? OR CLIENT? ? OR ESHOPPER? OR RE- QUEST?R? ? OR MEMBER? ?)(1W)S2
S7	1003	(SUPPLIER? OR SELLER? OR DEALER? OR VEND?R? ? OR BROKER? ? OR TRANDER? ? OR MERCHANT? ? OR AGENT? ? OR RESELLER? OR DIST- RIBUT?R? ? OR RETAILER? OR MANUFACTURER?)(1W)S2
S8	34	TRADER? ?(1W)S2
S9	237369	SYNC???? ? OR HOTSYNC? OR DATASYNC? OR SYNCHRONIS??????? ? - OR SYNCHRONIZ?????? ?
S10	82345	UPDAT???? ? OR UP()(DATE? ? OR DATING?)
S11	954	S3:S8(25N)S9:S10
S12	1	S1(25N)S11
S13	2732040	REPLIC? OR COPY? OR COPIE? ? OR DUPLICAT? OR REPRODUC? OR - RECREAT? OR RECONSTRUCT? OR MIRROR? OR CLON??? ? OR REGENERAT?
S14	139281	S13(2N)(DATA OR INFORMATION OR OBJECT? ? OR MESSAGE? OR FI- LE? ? OR CONTENT OR ECONTENT OR RECORD? ? OR REPORT? ?)
S15	554	S3:S8 AND S9
S16	1761	S3:S8 AND S10
S17	90	S15 AND S16
S18	37	S17 AND S6
S19	1	S17 AND S7
S20	9	S17 AND S14
S21	4	S18 AND S14
S22	152	S3:S8 AND S9:S10 AND S14
S23	4	S22 AND S18
S24	42	S18:S21 OR S23
S25	41	S24 NOT S12
S26	41	IDPAT (sorted in duplicate/non-duplicate order)
S27	40	IDPAT (primary/non-duplicate records only)

17/3,K/1 (Item 1 from file: 347)  
 DIALOG(R)File 347:JAPIO  
 (c) 2004 JPO & JAPIO. All rts. reserv.

07762367 \*\*Image available\*\*  
 SWITCH DEVICE WITH INCORPORATED CACHE WITH INTER-SWITCH DATA TRANSFER  
 FUNCTION, AND CONTROL METHOD

PUB. NO.: 2003-256276 [JP 2003256276 A]  
 PUBLISHED: September 10, 2003 (20030910)  
 INVENTOR(s): IKEDA JUNICHIRO  
 APPLICANT(s): NEC CORP  
 APPL. NO.: 2002-051427 [JP 200251427]

FILED: February 27, 2002 (20020227)

ABSTRACT

... incorporate a cache memory with inter-switch data transfer function for storing a frame transferred **between** the **server** A1 or a server B2 and the storage device 5, and the switch device A3...

...are connected by an inter-switch path 8. When data in a cache memory are **updated**, the data are transferred with the other switch device via the inter-switch path 8, and the data are **synchronized** with the cache memory in the other switch device.

COPYRIGHT: (C)2003,JPO

? t17/3,k/2-40

17/3,K/2 (Item 2 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.

07521994 \*\*Image available\*\*

DATA PROCESSING SYSTEM WITH MULTIPATH I/O REQUEST MECHANISM

PUB. NO.: 2003-015825 [JP 2003015825 A]

PUBLISHED: January 17, 2003 (20030117)

INVENTOR(s): HODGES PAUL

HURLEY MICHAEL GARWOOD

OUCHI NORMAN KENNETH

SHIH MIEN

APPLICANT(s): INTERNATL BUSINESS MACH CORP (IBM)

APPL. NO.: 2002-136492 [JP 2002136492]

Division of 09-009139 [JP 979139]

FILED: January 22, 1997 (19970122)

PRIORITY: 96 597092 [US 96597092], US (United States of America),  
February 05, 1996 (19960205)

ABSTRACT

... This data processing system has a plurality of independent paths 352, 354 for the communication **between** a **host** and a plurality of storage devices. Each path has its own queue 413, 415, services...

... and a status of the executed latest ID. Queues are serviced and their status are **updated** based on the contents of the mailbox. Consequently, the queue in each path is allowed to be completely out of **synchronization** with each queue in other paths.

COPYRIGHT: (C)2003,JPO

17/3,K/3 (Item 3 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.

07512213 \*\*Image available\*\*

**CLUSTERED APPLICATION SERVER AND WEB SYSTEM HAVING DATABASE STRUCTURE**

PUB. NO.: 2003-006036 [JP 2003006036 A]

PUBLISHED: January 10, 2003 (20030110)

INVENTOR(s): NISHIZAWA ITARU

SAGAWA NOBUTOSHI

APPLICANT(s): HITACHI LTD

APPL. NO.: 2001-192189 [JP 2001192189]

FILED: June 26, 2001 (20010626)

**CLUSTERED APPLICATION SERVER AND WEB SYSTEM HAVING DATABASE STRUCTURE**

**ABSTRACT**

... system is provided with a function to create a cache database cluster which can be **updated** on the **cluster server** and to **synchronize** it with the database server if necessary. Furthermore, the Web system is provided with a...

... to the cache database cluster and makes it possible to deal with addition of the **cluster server** to the system even when the load of the database access increases.

COPYRIGHT: (C)2003...

17/3,K/4 (Item 4 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

07264071 \*\*Image available\*\*  
DATA MAINTENANCE SYSTEM AND METHOD OF DUAL SYSTEM

PUB. NO.: 2002-132531 [JP 2002132531 A]  
PUBLISHED: May 10, 2002 (20020510)  
INVENTOR(s): YAMAZAKI FUJITO  
OKABE HIROYUKI  
APPLICANT(s): NEC CORP  
NEC SOFT LTD  
APPL. NO.: 2000-322602 [JP 2000322602]  
FILED: October 23, 2000 (20001023)

**ABSTRACT**

... SOLVED: To provide a data maintenance system and method of dual-redundant system allowing an **update** of a database at any timing and allowing a **synchronized** maintenance between main **group server** and subgroup server in a dual- redundant.

SOLUTION: In the system, a maintenance terminal 31 perform a maintenance operation with inputting **update** data to a database 15. An in-operation server 1 stores a result of the maintenance operation into a maintenance difference database 19 to **update** the database 15 by contents of the database 19 based on the database **update** request. The server 1 informs **update** information to an in-standby server 2. The server 2 **updates** the database 19 and a database 25 by the informed **update** information. The server 1 registers an **update** history into a database 10 of difference **update** history and a database 16 of **update** history.

COPYRIGHT: (C)2002,JPO

17/3,K/5 (Item 5 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

07165403 \*\*Image available\*\*  
CLIENT/SEVER TYPE INFORMATION **SYNCHRONIZING** CONTROL METHOD AND  
INFORMATION **SYNCHRONIZING** SYSTEM

PUB. NO.: 2002-033787 [JP 2002033787 A]

PUBLISHED: January 31, 2002 (20020131)  
INVENTOR(s): YUMOTO KAZUMA  
HOSHI TORU  
TAKAHASHI TORU  
APPLICANT(s): HITACHI LTD  
HITACHI INFORMATION TECHNOLOGY CO LTD  
APPL. NO.: 2000-221051 [JP 2000221051]  
FILED: July 17, 2000 (20000717)

CLIENT/SEVER TYPE INFORMATION SYNCHRONIZING CONTROL METHOD AND  
INFORMATION SYNCHRONIZING SYSTEM

#### ABSTRACT

PROBLEM TO BE SOLVED: To provide a device for speedily reflecting each of terminals with **updated** information, at **synchronizing** of information **updating** , while suppressing the load of terminals on a network when constructing an information **synchronizing** system, while utilizing a request-response type communication protocol in an internet environment in a **client / server** type system.

SOLUTION: When a **synchronizing** information acquisition request from a client is received in a **synchronizing** information managing processing to be executed in a server, **synchronizing** information specified by that request is compared with **synchronizing** information managed in the server. When both the information is equal, a response to a client is held for a elapse of a fixed time or until the **synchronizing** information managed in the server is **updated** . After the elapse of fixed time or when the **synchronizing** information managed in the server is **updated** , the **synchronizing** information managed in the server is immediately returned to the client as a response.

COPYRIGHT...

17/3,K/6 (Item 6 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

06807034 \*\*Image available\*\*  
MASTER-SLAVE RELATION INFORMATION SYNCHRONIZATION SYSTEM IN DECENTRALIZED  
DATABASE

PUB. NO.: 2001-034518 [JP 2001034518 A]  
PUBLISHED: February 09, 2001 (20010209)  
INVENTOR(s): MORIYAMA JUNICHI  
APPLICANT(s): NEC SOFTWARE CHUGOKU LTD  
APPL. NO.: 11-211476 [JP 99211476]  
FILED: July 27, 1999 (19990727)

MASTER-SLAVE RELATION INFORMATION SYNCHRONIZATION SYSTEM IN DECENTRALIZED  
DATABASE

#### ABSTRACT

PROBLEM TO BE SOLVED: To make efficiently **synchronizable** **updated** data in a decentralized database system of **multiple** **servers** having a master-slave relation between a master table and a slave table while maintaining...

... slave table (copy) 92. A log monitor means 5 periodically monitors whether or not an **update** log file 4 is **updates** according to **update**

log information outputted when a master table (master) 31 is **updated** in a relational database (master) on a master server 1. An **update** reflecting process means 6 reflects the **update** contents on the master table (dummy) 93 in the relational database (slave) 9 in the slave server 7 according to the latest **update** log information of the **update** log file 4 when the log monitor means 5 detects the **update** of the **update** log file 4.

COPYRIGHT: (C)2001,JPO

17/3,K/7 (Item 7 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

06771288 \*\*Image available\*\*  
SYSTEM FOR DATA **SYNCHRONIZATION** **BETWEEN** **SERVER** IN DECENTRALIZED  
SERVER CONSTITUTION

PUB. NO.: 2000-357162 [JP 2000357162 A]  
PUBLISHED: December 26, 2000 (20001226)  
INVENTOR(s): TAKAHASHI TERUO  
APPLICANT(s): NEC COMMUN SYST LTD  
APPL. NO.: 11-169888 [JP 99169888]  
FILED: June 16, 1999 (19990616)

SYSTEM FOR DATA **SYNCHRONIZATION** **BETWEEN** **SERVER** IN DECENTRALIZED  
SERVER CONSTITUTION

#### ABSTRACT

PROBLEM TO BE SOLVED: To actualize a recovery process for data **synchronism** in the case of fault occurrence by load decentralization by allowing a master server to request a slave server to **update** data when the slave server is available and **updating** the data on the server when the data modification by the slave server ends normally.

SOLUTION: When a request to **update** synchronous data is generated, the master server 41 issues an **updating** request to the slave server 42 before **updating** its data since the slave server 42 is registered on this server 41. The slave server 42 sends an answer 47 to the **updating** request 44 back to the master server 41. The master server 41 **updates** its data when the answer 47 from the slave server 42 is normal. Then the slave server 42 having received the **updating** request 44 issues an **updating** request 45 to a server 43 similarly since the server 43 is registered as a...

...server 43 is a link-terminal server since no slave server is registered. The server **updates** its data through a similar process as well.

COPYRIGHT: (C)2000,JPO

17/3,K/8 (Item 8 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

06664947 \*\*Image available\*\*  
SERVER DUPLICATION SYSTEM

PUB. NO.: 2000-250771 [JP 2000250771 A]  
PUBLISHED: September 14, 2000 (20000914)  
INVENTOR(s): TSUCHIMACHI KEIICHI  
APPLICANT(s): NEC CORP

APPL. NO.: 11-049089 [JP 9949089]  
FILED: February 25, 1999 (19990225)

ABSTRACT

PROBLEM TO BE SOLVED: To fast and also reliably operate a duplication system for a **network server** and database server which poses a problem in a 24-hour operation non-stop system...

...connected to main processes 11 and 21 and are monitored all the time, In the **synchronization** of the servers of respective databases 15 and 25, **updatation** history is always stored in the **updatation** history database 16 of the self-server 1 when the database **updatation** process 14 of the server 1 **updates** the database 15 of the self-server. Further, the **updatation** history is notified to the database **updatation** process 24 of the standby server 2 and **updates** the database 25 of the self-server 2 and an **updatation** history database 26. When a failure takes place in the server 1 and communication between...

17/3,K/9 (Item 9 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

06418884 \*\*Image available\*\*  
METHOD FOR **UPDATING** PLURAL REGISTERS, PLURAL-REGISTER SYSTEM AND PLURAL-CLOCK SYSTEM

PUB. NO.: 2000-004443 [JP 2000004443 A]  
PUBLISHED: January 07, 2000 (20000107)  
INVENTOR(s): ERIC M FOSTER  
LEE WILLIAM R  
RONALD S SVECK  
APPLICANT(s): INTERNATL BUSINESS MACH CORP (IBM)  
APPL. NO.: 11-075580 [JP 9975580]  
FILED: March 19, 1999 (19990319)  
PRIORITY: 47983 [US 9847983], US (United States of America), March 25, 1998 (19980325)

METHOD FOR **UPDATING** PLURAL REGISTERS, PLURAL-REGISTER SYSTEM AND PLURAL-CLOCK SYSTEM

ABSTRACT

... TO BE SOLVED: To provide separate system time clock (STC) registers, which can be independently **updated**, by executing any one of the independent **update** and synchronous **update** of first and second count values in first and second counter registers corresponding to first...

...the address values of ADDR-VID register 501 and an ADDR-AUD register 511 are **different**, a **host** controller separately writes **updating** in an STC-VID register and an STC-AUD register. By making equal the address...

...in any one of the ADDR-VID register 501 and ADDR-AUD register 511 after **synchronizing** both the registers 500 and 510, the independence of counters is recovered.

COPYRIGHT: (C)2000...

17/3,K/10 (Item 10 from file: 347)  
DIALOG(R) File 347:JAPIO



(c) 2004 JPO & JAPIO. All rts. reserv.

06364449    \*\*Image available\*\*

TRANSMITTER,        TRANSMISSION        METHOD,        RECEIVER,        RECEPTION        METHOD,  
TRANSMISSION-RECEPTION SYSTEM AND TRANSMISSION-RECEPTION METHOD

PUB. NO.:        11-306059    [JP 11306059 A]  
PUBLISHED:       November 05, 1999 (19991105)  
INVENTOR(s):     YAMAGISHI YASUAKI  
                  GONNO YOSHIHISA  
                  HARAOKA KAZUO  
                  NISHIO IKUHIKO  
APPLICANT(s):    JISEDAI JOHO HOSO SYSTEM KENKYUSHO KK  
                  SONY CORP  
APPL. NO.:       10-114801    [JP 98114801]  
FILED:           April 24, 1998 (19980424)

ABSTRACT

PROBLEM TO BE SOLVED: To efficiently perform strict **synchronization update** of data.

SOLUTION: Exchange is performed **between** a **server 2** and a reception terminal 5 in accordance with a protocol which modifies a two phase commitment protocol and data **update** is executed. That is, in the server 2, an **update** inquiry whether or not the data are **updated** is transmitted to plural terminals including the reception terminal 5 and a response to it is received. Furthermore, at a specified time, tabulation of responses to the **update** inquiry is performed and, on the basis of the tabulation, it is decided whether or not the **update** of data is performed, and the decision is transmitted to the plural terminals. On the other hand, in the reception terminal 5, the **update** inquiry from the server 2 is received and a response to it is transmitted. Then, when it is transmitted as a response to the **update** inquiry that the **update** of data is not performed, if the decision to the effect that the **update** of data is performed is received from the server 2, an access to the data of an **update** object is defrozen.

COPYRIGHT: (C)1999,JPO

17/3,K/11        (Item 11 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

05447756    \*\*Image available\*\*

FILE **SYNCHRONIZING** SYSTEM

PUB. NO.:        09-062556    [JP 9062556 A]  
PUBLISHED:       March 07, 1997 (19970307)  
INVENTOR(s):     ONO SHUJI  
APPLICANT(s):    NEC CORP [000423] (A Japanese Company or Corporation), JP  
                  (Japan)  
APPL. NO.:       07-234714    [JP 95234714]  
FILED:           August 21, 1995 (19950821)

FILE **SYNCHRONIZING** SYSTEM

ABSTRACT

...SOLUTION: At the exit of start processing of an **update** job, an exclusive control means 1-1 makes the **update** job exclusively occupy a

synchronous file in accordance with a **synchronization** definition 1-2 and reports an exclusive occupancy request of a synchronous file 2-4...

...that the file can be referred to. At the exit of end processing of the **update** job, the exclusive control means 1-1 releases exclusive occupancy of the synchronous file 1...

... synchronous file 2-4 to the exclusive control means 2-1 in accordance with the **synchronization** definition 1-2, and a file transfer means 1-3 transfers and copies the **updated** synchronous file 1-4 to **another host** 2 in accordance with the **synchronization** definition 1-2 to perform the asynchronous **update** processing of the synchronous file 2-4.

17/3,K/12 (Item 12 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

05168247 \*\*Image available\*\*  
DISTRIBUTED PROCESSING SYSTEM FOR FACILITY MANAGEMENT SYSTEM

PUB. NO.: 08-123747 [JP 8123747 A]  
PUBLISHED: May 17, 1996 (19960517)  
INVENTOR(s): FUJIKAWA MASAO  
WAKIMOTO KOICHI  
APPLICANT(s): FUJITSU LTD [000522] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 06-255589 [JP 94255589]  
FILED: October 20, 1994 (19941020)

#### ABSTRACT

... a processor and a master data base 11 is also provided with a data reference/ **updating** processing part 13, a communication processing part 14, a data developing processing part 15, a fixed time starting processing part 16 to be started by previously set **synchronism**, and a load monitoring processing part 17 for monitoring the excess load of its own...

...managing the load evading order of a function included in the self-node. Data reference/ **updating** is executed by **both** the **servers** 1, 2, data developing processing is executed after recognizing that the data are the same level between **both** the **servers** 1, 2, and when communication is not executed for fixed time, normality is checked by...

17/3,K/13 (Item 13 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

04821895 \*\*Image available\*\*  
MULTIPLEXING FILE MANAGING SYSTEM

PUB. NO.: 07-114495 [JP 7114495 A]  
PUBLISHED: May 02, 1995 (19950502)  
INVENTOR(s): YAMAURA MASAYOSHI  
APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 05-261058 [JP 93261058]  
FILED: October 19, 1993 (19931019)

#### ABSTRACT

PURPOSE: To obtain perfect consistency for data **between** servers and to easily and quickly restore a file when a fault occurs by applying the simultaneous **update** processing of a multiplexing file shared by plural servers connected to a data transmission network...

... clients 4, 5 are connected to the servers 1, 2 as subordinates. A multiplexing file **update** means 112 performs the simultaneous **update** processing of the multiplexing file on the servers 1, 2 according to the control of...

... A multiplexing file restoring means 113 automatically returns the multiplexing file to a state before **update** when **update** abnormality occurs in the **update** of the multiplexing file, and restores the file by taking **synchronism** with the file. A saving filing area 12 and file memory devices 1-1, 1-2 to check the consistency of the file when the simultaneous **update** processing of the multiplexing file is performed, are provided.

17/3,K/14 (Item 14 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

04225154 \*\*Image available\*\*  
HOST COMPUTER DEVICE

PUB. NO.: 05-216854 [JP 5216854 A]  
PUBLISHED: August 27, 1993 (19930827)  
INVENTOR(s): KOSEKI TORU  
APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 04-020161 [JP 9220161]  
FILED: February 05, 1992 (19920205)  
JOURNAL: Section: P, Section No. 1655, Vol. 17, No. 662, Pg. 58,  
December 07, 1993 (19931207)

#### ABSTRACT

...CONSTITUTION: A fault information **updating** part 4 reflects generated fault information on a fault information management file 10, and also...

... to the other host computer, and excludes its file 10 in order to avoid simultaneous **updating** of the fault information management file 10 **between** the **hosts** before executing each processing. After the exclusion, a fault generated first is registered in a file reflection memory 6 and **updated**. Subsequently, a monitoring part control circuit 13 actuates an inter-plural hosts fault information **synchronizing** circuit 7 and instructs a notice of a generated fault executed to the other host computer, and the inter-plural hosts fault information **synchronizing** circuit 7 executes the instruction. Next, the contents of the file reflection memory 6 **updated** already are transferred to the fault information management file 10 through a plural hosts controller...

17/3,K/15 (Item 15 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

03795352 \*\*Image available\*\*  
COMMUNICATION PROCEDURE OF SIMULTANEOUS **UPDATE** BETWEEN CENTERS

PUB. NO.: 04-160452 [JP 4160452 A]  
PUBLISHED: June 03, 1992 (19920603)

INVENTOR(s): AOKI SENJI  
APPLICANT(s): NEC SOFTWARE KANSAI LTD [490843] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 02-284919 [JP 90284919]  
FILED: October 23, 1990 (19901023)  
JOURNAL: Section: P, Section No. 1425, Vol. 16, No. 454, Pg. 78, September 21, 1992 (19920921)

COMMUNICATION PROCEDURE OF SIMULTANEOUS UPDATE BETWEEN CENTERS

ABSTRACT

PURPOSE: To update files of respective hosts at remote places while synchronizing the hosts by checking file environment wherein the simultaneous update between the hosts is performed by transmission and reception between the hosts and updating the files of the both when the check result indicates an OK...

...the input image 2 and sends an end message to the HOST-B to indicate update operation, locks a lock file 3 for synchronizing the HOST-A and HOST-B, and stores processes of a communication between the centers...

... correspondence between the centers. A program E receives the message from the HOST-B and updates a file 5.

17/3,K/16 (Item 16 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

03382142 \*\*Image available\*\*  
DATA TRANSMITTER

PUB. NO.: 03-045042 [JP 3045042 A]  
PUBLISHED: February 26, 1991 (19910226)  
INVENTOR(s): SHIOBARA YASUHISA  
APPLICANT(s): TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 01-181404 [JP 89181404]  
FILED: July 13, 1989 (19890713)  
JOURNAL: Section: E, Section No. 1065, Vol. 15, No. 183, Pg. 162, May 10, 1991 (19910510)

ABSTRACT

... a sudden transmission request, allowing each device to fetch the data content for each period, updating, utilizing, and sending the data...

...fiber dispersion data exchange interface) so as to apply data conversion and a data communicated between host devices connecting to the LAN is classified into a high speed (H) level and a...

...M) level data upon the emergency and the H level data is sent by a synchronization frame in the synchronization service and the M level data is sent by using an asynchronization frame by the...

17/3,K/17 (Item 17 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

03053385 \*\*Image available\*\*  
COORDINATE REGISTER AND GRAPHIC CURSOR DISPLAY DEVICE

PUB. NO.: 02-028885 [JP 2028885 A]  
PUBLISHED: January 30, 1990 (19900130)  
INVENTOR(s): MIYAMOTO YUICHIRO  
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company  
or Corporation), JP (Japan)  
APPL. NO.: 63-179548 [JP 88179548]  
FILED: July 19, 1988 (19880719)  
JOURNAL: Section: P, Section No. 1034, Vol. 14, No. 179, Pg. 130,  
April 10, 1990 (19900410)

ABSTRACT

...directly receive the writing data of a host CPU at any time and a frame  
**synchronizing** part to convert the output of the above-mentioned writing  
part into an output synchronous...

...CONSTITUTION: **Both** a **host** CPU writing part 1 and a frame  
**synchronizing** part 2 are composed of DFFs and a coordinate register is  
composed by connecting the **two**. The **host** CPU writing part 1 can be  
rewritten at any time for the host CPU. In the coordinate register, the  
frame **synchronizing** part 2 is provided behind the host CPU writing part 1  
and data 6 held by the coordinate register are **updated** only at a vertical  
**synchronizing** period. The vertical **synchronizing** period is the fly-back  
interval of a scanning line and has no influence on...

17/3,K/18 (Item 18 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

02573059 \*\*Image available\*\*  
CONTROL SYSTEM FOR CHANGING AND **SYNCHRONIZING** NETWORK RESOURCE  
CONSTITUTION

PUB. NO.: 63-189959 [JP 63189959 A]  
PUBLISHED: August 05, 1988 (19880805)  
INVENTOR(s): ISHIBASHI KOJI  
APPLICANT(s): FUJITSU LTD [000522] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 62-022020 [JP 8722020]  
FILED: February 02, 1987 (19870202)  
JOURNAL: Section: P, Section No. 798, Vol. 12, No. 470, Pg. 122,  
December 09, 1988 (19881209)

CONTROL SYSTEM FOR CHANGING AND **SYNCHRONIZING** NETWORK RESOURCE  
CONSTITUTION

ABSTRACT

... to improve a reliability after a release by automatically making a  
recognition on a resource **between** respective **host** computers coincide at  
the time of changing the resource...

... change information to inform to a communication controller 18. The  
respective host computers 10A, 10B **update** resource management control  
tables 13A, 13B held in change processing parts 12A, 12B and processed...

17/3,K/19 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015986169 \*\*Image available\*\*

WPI Acc No: 2004-144019/200414

XRPX Acc No: N04-114819

**Transaction synchronization process for remote communication device e.g. palmtop, involves transmitting status of client to server and transmitting return binary unit to client device for confirming process completion**

Patent Assignee: ABACO PR INC (ABAC-N)

Inventor: ARTEAGA C; DIAZ A; FERGUSON K; MENDEZ J A; MENDEZ M; RIVERA P

Number of Countries: 026 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200412094	A1	20040205	WO 2003US22934	A	20030722	200414 B

Priority Applications (No Type Date): US 2002399440 P 20020729

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200412094 A1 E 73 G06F-015/16

Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR

**Transaction synchronization process for remote communication device e.g. palmtop, involves transmitting status of client to server and transmitting return binary unit to client device for confirming process completion**

Abstract (Basic):

... The process involves determining **synchronization** status of a client device (20) at a remote server. Client **synchronization** extensions are executed to gather data to be sent to the server. Server **synchronization** extensions are executed to process single binary unit and a return single binary unit is...  
... Used for **synchronizing** transactions conducted on a remote communication device e.g. handheld computer, personal digital assistant (PDA...  
...operation. The method allows the transaction to be quickly processed on an enterprise network to **update** necessary data and files within a variety of network application...  
...Title Terms: **SYNCHRONISATION** ;

17/3,K/20 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015912380 \*\*Image available\*\*

WPI Acc No: 2004-070220/200407

XRPX Acc No: N04-056536

**Distributed network configuration change management system for entertainment, updates configuration of each network application with appropriate converted configuration**

Patent Assignee: KORTRIGHT K (KORT-I); TIME WARNER CABLE DIV TIME WARNER ENTERT (TIME-N)

Inventor: KORTRIGHT K

Number of Countries: 100 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030229686	A1	20031211	US 2002387517	P	20020607	200407 B
			US 2002335272	A	20021231	
WO 2003104930	A2	20031218	WO 2003US17911	A	20030606	200409

Priority Applications (No Type Date): US 2002387517 P 20020607; US  
2002335272 A 20021231

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes  
US 20030229686 A1 21 G06F-015/177 Provisional application US 2002387517

WO 2003104930 A2 E G06F-000/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM  
ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB  
GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ  
UG ZM ZW

**Distributed network configuration change management system for  
entertainment, updates configuration of each network application with  
appropriate converted configuration**

Abstract (Basic):

... server converts the new configuration into a format accepted by  
each network application operated by **network application server**  
(225). The configuration of each network application is **updated** with  
appropriate converted configuration.

... 1) configuration **synchronization** method; and...

...Eliminates the human errors associated with **updating** network  
management applications. Automatically detects the changes in devices  
on the network and immediately **updates** all network management system  
applications associated with changed devices...

... **network application server** (225

...Title Terms: **UPDATE** ;

17/3,K/21 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015747126 \*\*Image available\*\*

WPI Acc No: 2003-809327/200376

**Method for processing and managing data of user interface server in  
network management system**

Patent Assignee: LG ELECTRONICS INC (GLDS )

Inventor: LEE S H

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2003053679	A	20030702	KR 200183627	A	20011222	200376 B

Priority Applications (No Type Date): KR 200183627 A 20011222

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes  
KR 2003053679 A 1 H04L-012/24

**Method for processing and managing data of user interface server in  
network management system**

Abstract (Basic):

... an NMS (Network Management System) is provided to reduce a load

of a GUI (Graphic User Interface) server and shorten execution time over an alarm-related request by minimizing a traffic of a...  
 ... processing procedure (S324). If the alarm has not been duplicated (S322), the server alarm manager updates an alarm table with the received alarm information and stores the alarm information in a...  
 ...representative alarm has been changed, for an operator's recognition (S330,S340). When an alarm synchronization event is generated and transferred from the equipment, the server alarm manager checks a serial...  
 ...changed (S350,S351). If the alarm serial number has been changed, the server alarm manager updates the alarm table according to the alarm information and updates the alarm information in the database (S352,S353...

17/3,K/22 (Item 4 from file: 350)  
 DIALOG(R)File 350:Derwent WPIX  
 (c) 2004 Thomson Derwent. All rts. reserv.

015684832 \*\*Image available\*\*  
 WPI Acc No: 2003-747021/200370  
 XRPX Acc No: N03-598702

Data synchronization method in laptop computer, involves converting repository data objects into form suitable for handheld device for updating of version information of hand held data object  
 Patent Assignee: PATIENTKEEPER INC (PATI-N)  
 Inventor: FIELDS C A; KOZAK R P; LEE C Y; MADRID G A; TOTH A J; VAKIL S S  
 Number of Countries: 001 Number of Patents: 001  
 Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030177408	A1	20030918	US 2001282131	P	20010406	200370 B
			US 2001282249	P	20010406	
			US 2002118598	A	20020408	
			US 2002237549	A	20020906	
			US 2003356366	A	20030130	

Priority Applications (No Type Date): US 2003356366 A 20030130; US 2001282131 P 20010406; US 2001282249 P 20010406; US 2002118598 A 20020408 ; US 2002237549 A 20020906

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030177408	A1		10	H04L-007/00	Provisional application US 2001282131

Provisional application US 2001282249  
 Cont of application US 2002118598  
 CIP of application US 2002237549

Data synchronization method in laptop computer, involves converting repository data objects into form suitable for handheld device for updating of version information of hand held data object

Abstract (Basic):

... The version information of the data objects to be synchronized are checked. The need for updating of handheld objects is determined based on which corresponding repository data is retrieved from repository, and converted into handheld data object and transmitted to the hand held device for updating of version information of the hand



held data object.  
... 1) system for **synchronizing** repository and several handheld devices; and...  
...2) data **updating** method...  
...For **synchronizing** data between handheld devices such as laptop computer and server...  
...Improves the speed of **synchronization** by converting only specified repository data objects into handheld device suitable form, for **updating** of version information handheld data object...  
...The figure shows the schematic view of the data **synchronizing** process between server and the hand held devices...  
... **synchronization** server (11  
...Title Terms: **SYNCHRONISATION** ;

17/3,K/23 (Item 5 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015684789 \*\*Image available\*\*  
WPI Acc No: 2003-746978/200370  
XRPX Acc No: N03-598659

**Serial devices updating apparatus for processor-based systems, access data in shift registers in parallel, while detecting synchronizing signal from system board controller**

Patent Assignee: DROGICHEN D P (DROG-I); GILBERT J A (GILB-I); GRAF E E (GRAF-I)

Inventor: DROGICHEN D P; GILBERT J A; GRAF E E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030177287	A1	20030918	US 2002100127	A	20020318	200370 B

Priority Applications (No Type Date): US 2002100127 A 20020318

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030177287	A1	15	G06F-003/00	

**Serial devices updating apparatus for processor-based systems, access data in shift registers in parallel, while detecting synchronizing signal from system board controller**

Abstract (Basic):

... system board controller. The data in shift registers are accessed in parallel while detecting a **synchronizing** signal provided from the controller.

... 1) serial devices **updating** method; and...

...2) serial devices **updating** system...

...For **updating** serial devices in processor based system e.g. mid-range server system in network-centric environment...

...Title Terms: **UPDATE** ;

17/3,K/24 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015684100 \*\*Image available\*\*

WPI Acc No: 2003-746289/200370

XRPX Acc No: N03-597971

Client server system for distributed networks, has application server  
configured to provide set of attributes of session data for  
synchronizing primary state of session data with client state

Patent Assignee: SUN MICROSYSTEMS INC (SUNM )

Inventor: KHEMANI P; KUMAR A; SUSARLA H R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030167297	A1	20030904	US 200287652	A	20020301	200370 B

Priority Applications (No Type Date): US 200287652 A 20020301

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030167297	A1	22	G06F-015/16	

Client server system for distributed networks, has application server  
configured to provide set of attributes of session data for  
synchronizing primary state of session data with client state

Abstract (Basic):

... One application server is configured to provide a set of  
attributes of session data for **synchronizing** a primary state (112) of  
session data with a client state. A distributed store (110) is  
configured to **synchronize** the primary state with the client state  
according to the provided set of attributes.

... a) a method for **synchronizing** primary state with client state  
using provided set of attributes...

...b) an article of manufacture with software instructions to **synchronize**  
primary state with client state using provided set of attributes...

...The system consumes less bandwidth to **update** and restore backup state  
information. The system does not produce any delays in servicing the...

...Title Terms: **SYNCHRONISATION** ;

17/3,K/25 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015632238 \*\*Image available\*\*

WPI Acc No: 2003-694420/200366

**Sensitivity index maturity type robot toy and method for ripening  
sensitivity of robot toy**

Patent Assignee: HYUN M T (HYUN-I)

Inventor: CHOI G H; HYUN M T; KANG C I

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2002097477	A	20021231	KR 200135427	A	20010621	200366 B

Priority Applications (No Type Date): KR 200135427 A 20010621

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
-----------	------	--------	----------	--------------

## Abstract (Basic):

... index corresponded to the robot toy in a virtual space connected to the Internet, and **synchronizing** sensitivity indexes of the robot toy in an actual space and the virtual robot in...

... If a **synchronization** of sensitivity indexes of a robot toy and a virtual robot in an operating server corresponded to the robot toy is requested in the operating server through a **client server** (S401,S402), the **client server** reads a sensitivity index being stored in a sensitivity index database of the robot toy...

...the sensitivity index of the robot toy(S404). The added value is transmitted to the **client server** and **updated** as new sensitivity index of the robot toy. That is, the sensitivity index of the...

17/3,K/26 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015617837 \*\*Image available\*\*

WPI Acc No: 2003-679997/200364

XRPX Acc No: N03-542912

**Server and handheld device database synchronizing method, involves establishing connection between server and synchronization client and providing identifier for handheld application and metadata to update application**

Patent Assignee: SIEBEL SYSTEMS INC (SIEB-N)

Inventor: CHUNG P; GEORGE D; HUANG X F; RABBERS D L; SCOTT B; VEJLSTRUP M

Number of Countries: 100 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200373292	A1	20030904	WO 2003US5773	A	20030225	200364 B

Priority Applications (No Type Date): US 200284628 A 20020225

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200373292 A1 E 73 G06F-012/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW

**Server and handheld device database synchronizing method, involves establishing connection between server and synchronization client and providing identifier for handheld application and metadata to update application**

## Abstract (Basic):

... The method involves establishing a connection **between a server** (114) and a **synchronization** client. An identifier is received for the server database structure (112) and for a version...

...handheld application from the server. Transaction information is sent to the server and metadata to **update** the handheld application is

received from the device. The data extracted from the server database  
...  
... a) a system for **synchronizing** a main database of a server and  
local database of a handheld device...  
...database to determine which database data and metadata are needed by the  
handheld device during **synchronization**, as well as to upload the  
transactions made by the user in the device database thereby reducing  
the time needed to complete a **synchronization** operation...  
... **synchronization** manager (130  
...Title Terms: **SYNCHRONISATION** ;

17/3,K/27 (Item 9 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015608789 \*\*Image available\*\*  
WPI Acc No: 2003-670946/200363  
XRPX Acc No: N03-535758

**Cookies synchronizing method for Internet, involves sending  
notifications of changes in cookies from computing device to server that  
stores information and sends it to other device which update their  
cookies accordingly**

Patent Assignee: MCGEE J R (MCGE-I); MITCHELL C C (MITC-I); MORTON M J  
(MORT-I); PETERS B A (PETE-I)

Inventor: MCGEE J R; MITCHELL C C; MORTON M J; PETERS B A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030131045	A1	20030710	US 200243355	A	20020109	200363 B

Priority Applications (No Type Date): US 200243355 A 20020109

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030131045	A1	12	G06F-015/16	

**Cookies synchronizing method for Internet, involves sending  
notifications of changes in cookies from computing device to server that  
stores information and sends it to other device which update their  
cookies accordingly**

Abstract (Basic):

... stored at the server. The server sends data to the other members  
whose computing devices **update** their cookies based on the received  
data.

... Used in Internet for **synchronizing** cookies across **multiple  
client server** machines on a network...

...The drawing shows a flow chart of the steps performed at a client  
machine for **synchronizing** cookies across multiple client machines...

...Title Terms: **SYNCHRONISATION** ;

17/3,K/28 (Item 10 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015594621 \*\*Image available\*\*

WPI Acc No: 2003-656776/200362  
Related WPI Acc No: 2002-200539  
XRPX Acc No: N03-523200

**Stored web pages updating system for content delivery networks , has server to communicate update command to memory that contains stored web pages associated with identified modified data, to update pages**

Patent Assignee: NEC CORP (NIDE )

Inventor: AGRAWAL D; CANDAN K S; LI W S

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6591266	B1	20030708	US 2000218418	P	20000714	200362 B
			US 2000639208	A	20000814	

Priority Applications (No Type Date): US 2000218418 P 20000714; US 2000639208 A 20000814

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6591266	B1	56	G06F-017/30	Provisional application US 2000218418

**Stored web pages updating system for content delivery networks , has server to communicate update command to memory that contains stored web pages associated with identified modified data, to update pages**

Abstract (Basic):

... determines the web pages that are associated with the identified data. The server communicates an **update** command to a memory containing the stored pages associated with identified the modified data, to **update** stored web pages.

... An INDEPENDENT CLAIM is also included for a method for **updating** stored web pages...

...Used for **updating** stored web pages of content delivery networks...

...The system intelligently caches and refreshes the dynamically generated static web contents to **synchronize** the data stored in cache or web servers with the data stored in data base...

...Title Terms: **UPDATE** ;

17/3,K/29 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015585790 \*\*Image available\*\*

WPI Acc No: 2003-647945/200362

XRPX Acc No: N03-515526

**Network-assisted navigation satellite receiver system, has the clock, ionosphere, troposphere and other corrections bundled into one polynomial**

Patent Assignee: ERIDE CORP (ERID-N); ERIDE INC (ERID-N); SEIKO EPSON CORP (SHIH ); EDWARDS S J (EDWA-I); MCBURNEY P W (MCBU-I)

Inventor: EDWARDS S J; MCBURNEY P W

Number of Countries: 033 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1336866	A2	20030820	EP 200228098	A	20021217	200362 B
JP 2003262668	A	20030919	JP 200341707	A	20030219	200363
US 20030163256	A1	20030828	US 200279217	A	20020219	200363
CN 1439891	A	20030903	CN 2003106153	A	20030219	200380
US 6701253	B2	20040302	US 200279217	A	20020219	200417

Priority Applications (No Type Date): US 200279217 A 20020219

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1336866 A2 E 11 G01S-005/14

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB

GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

JP 2003262668 A 14 G01S-005/14

US 20030163256 A1 G01C-021/00

CN 1439891 A G01S-005/02

US 6701253 B2 G06F-019/00

Abstract (Basic):

... The navigation satellite receiver system comprises: a **network server** with a first navigation satellite receiver for computing accurate time, and satellites' positions and velocities...  
... integer, fixed LSB value arithmetic calculations. The interconnecting network further provides for a subscription to **updated** ones of the polynomial for a fee. the **network server** supports real-time corrections to the network client at one of three assistance levels, autonomous...  
...information, and demi-autonomous with initial SPV information to speed up the first fix. The **network server** provides measured, measured-adjusted, and computed ionospheric and tropospheric corrections, and when the network client makes a request from the **network server**, a best estimate of a user position is given to a pre-position engine, and...  
...are determined. For each SV model, a correction polynomial is constructed with its reference time **synchronized** to such model...  
...reference station **network server** (102...

17/3,K/30 (Item 12 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015514682 \*\*Image available\*\*

WPI Acc No: 2003-576829/200354

XRPX Acc No: N03-458519

**Directory server e.g. iPlanet directory server includes pluggable services which manage replication of data from supplier server to consumer server, using replica update vector**

Patent Assignee: SUN MICROSYSTEMS INC (SUNM); GOOD G (GOOD-I); MERRELLS J (MERR-I); NATKOVICH O (NATK-I); SHAH P (SHAH-I); SMITH M C (SMIT-I)

Inventor: GOOD G; MERRELLS J; NATKOVICH O; SHAH P; SMITH M C

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030093440	A1	20030515	US 2001993937	A	20011106	200354 B
GB 2388933	A	20031126	GB 200225915	A	20021106	200378

Priority Applications (No Type Date): US 2001993937 A 20011106

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20030093440 A1 13 G06F-012/00

GB 2388933 A G06F-017/30

... **server e.g. iPlanet directory server includes pluggable services which manage replication of data from supplier server to consumer server**

, using replica update vector

Abstract (Basic):

... The directory server includes pluggable services which manage replication of data from a **supplier server** to **consumer server**, using replica **update vector** (RUV) which determines minimum set of **updates** necessary to **synchronize** both **supplier** and **consumer servers**.  
... 1) method of **updating replica update vector**; and...  
...2) apparatus for **updating replica update vector**...  
...RUV allows changes to **multiple servers** to be done quickly, reducing processing time and consumption. RUV is stored in stable storage...  
...Title Terms: **UPDATE** ;

17/3,K/31 (Item 13 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015481559 \*\*Image available\*\*  
WPI Acc No: 2003-543706/200352  
XRPX Acc No: N03-431326

Client-data refreshing method for computer network system, involves generating server data descriptor that is dependent on client data descriptor, according to which predetermined client data is updated

Patent Assignee: SAP AG (SAPS-N)  
Inventor: CHERDRON M; GANGADHARAPPA K  
Number of Countries: 026 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1318461	A1	20030611	EP 2001129096	A	20011207	200352 B

Priority Applications (No Type Date): EP 2001129096 A 20011207

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1318461	A1	E	31	G06F-017/30	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR

... descriptor that is dependent on client data descriptor, according to which predetermined client data is updated

Abstract (Basic):

... client data descriptor (170) having a browser independent format, is created in response to a **sync** -request (980-1). A server data descriptor that is dependent on the client-data descriptor...  
...901). The predetermined client data (150-T1) in a client data cache (920-1) is **updated** according to the server data descriptor.  
... The figure shows a general view of the **client** and **server** computer...

... **sync** request (980-1)  
...Title Terms: **UPDATE**

17/3,K/32 (Item 14 from file: 350)  
DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015416879 \*\*Image available\*\*

WPI Acc No: 2003-479019/200345

XRPX Acc No: N03-380697

Synchronization information communication method for computer system, involves receiving and storing updated records for down-transfer, while down-transfer and up transfer are performed asynchronously in full-duplex

Patent Assignee: WAVEWARE COMMUNICATIONS INC (WAVE-N)

Inventor: COOK D B; POLLARD T G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6549917	B1	20030415	US 99303095	A	19990429	200345 B

Priority Applications (No Type Date): US 99303095 A 19990429

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6549917	B1	10	G06F-017/30	

Synchronization information communication method for computer system, involves receiving and storing updated records for down-transfer, while down-transfer and up transfer are performed asynchronously in full...

Abstract (Basic):

... up-transfer list are transferred to host (50), to associate up-transferred records with snapshot. Updated host records and request to delete client records are received from record synchronization operation (34). Updated records are received and stored in cache for down-transfer, while down and up transfers...  
... Synchronization information communication method for computer systems, for synchronization of data between host and handheld client computers e.g. palmtop computer, desktop computer, laptop computer connected through corporate...

...The record synchronization process is performed quickly and specific cases where high-latency data channel is used. Improves the performance by integrating the communication logic and synchronization program in a single module. Full integration thus allows optimal creation of up-transfer and...

...The figure shows the schematic representation of the host/client architecture for communication synchronization .

...

...record synchronization operation (34

Title Terms: SYNCHRONISATION ;

17/3,K/33 (Item 15 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

015358216 \*\*Image available\*\*

WPI Acc No: 2003-419154/200339

XRPX Acc No: N03-334541

Computer-readable medium for storing data used in synchronizing object between server and client has response portion which indicates failed object synchronization if error occurs during object synchronization

Patent Assignee: MICROSOFT CORP (MICT )



Inventor: ALAM S; FLANAGIN S D; FRIEDMAN G; MOORE B; SERDY F S

Number of Countries: 033 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030046434	A1	20030306	US 2001930659	A	20010814	200339 B
EP 1291770	A2	20030312	EP 200218351	A	20020814	200339
CN 1407454	A	20030402	CN 2002141910	A	20020814	200345
JP 2003228505	A	20030815	JP 2002236525	A	20020814	200362

Priority Applications (No Type Date): US 2001930659 A 20010814

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030046434	A1	26	G06F-015/16	
EP 1291770	A2 E		G06F-009/46	
Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR				
CN 1407454	A		G06F-009/52	
JP 2003228505	A	71	G06F-012/00	

Computer-readable medium for storing data used in synchronizing object between server and client has response portion which indicates failed object synchronization if error occurs during object synchronization

Abstract (Basic):

... version portion which indicates the suitable version of a data structure to be used to **synchronize** an object **between** a **server** and a client. A command portion indicates a **synchronization** action for **synchronizing** the object **between** the **server** and the client. A response portion indicates a failed **synchronization** action when an error occurs during the **synchronization** action.

... a) an object **synchronization** system...

...For storing data used in **synchronizing** object **between** **server** and client...

...Allows **synchronization** of selected objects among number of objects **between** **server** and client using a protocol in a server or mobile device, without requiring **synchronization** of all objects. Prevents latency of responding to each **update** request by grouping the responses. Enables reducing latency in **synchronization** and the required bandwidth since only one message can report error, send request and respond to **updates** during **synchronization**. Allows a user to **synchronize** and send an electronic mail without requiring the user to wait while other items are **synchronized**. Prevents use of additional bandwidth during transmission by reporting failed object **synchronization**.

...The figure shows the logical flow diagram illustrating process for **synchronization** of object **between** **server** and client

...Title Terms: **SYNCHRONISATION** ;

17/3,K/34 (Item 16 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015339121 \*\*Image available\*\*

WPI Acc No: 2003-400059/200338

Method for playing game based on eq growth type virtual robot

Patent Assignee: HYUN M T (HYUN-I)  
Inventor: CHOI G H; HYUN M T; KANG C I  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2003009895	A	20030205	KR 200144560	A	20010724	200338 B

Priority Applications (No Type Date): KR 200144560 A 20010724

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
KR 2003009895	A		1 G06F-019/00	

Abstract (Basic):

... to participate in a game(S401). A game engine loads a game environment at a **client server** (S402). The game engine extracts a corresponding virtual robot from a database, places the virtual...

...data, generated by the game engine for controlling the virtual robot, is transmitted to the **client server**, and then being transmitted to the real robot for enabling the real robot to do...

...the game is finished, the EQ of both the virtual and the real robot is **updated** according to a difficulty and a result of the game(S408, S409). An EQ **synchronization** step between the virtual and the real robot is repeated because the **updated** EQ of the virtual robot can be different from that of the real robot(S411...

17/3,K/35 (Item 17 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015331969 \*\*Image available\*\*  
WPI Acc No: 2003-392904/200337  
XRPX Acc No: N03-314013

Application-based communication protocol for object-based information flow management in organization, has remote unit that updates information of central server by exchanging address between central server and remote unit

Patent Assignee: EVOLVEWORKS INC (EVOL-N)  
Inventor: BRENNAN T; ROSENBERG S  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030046355	A1	20030306	US 2001316331	P	20010831	200337 B
			US 2002230894	A	20020829	

Priority Applications (No Type Date): US 2001316331 P 20010831; US 2002230894 A 20020829

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030046355	A1		12 G06F-015/16	Provisional application US 2001316331

... based communication protocol for object-based information flow management in organization, has remote unit that updates information of central server by exchanging address between central server and remote unit

Abstract (Basic):

... and by exchanging the address between the remote terminal and central servers. The remote unit **updates** a portion of information of

central server.  
... 1) display data **updating** method; and...

...For object-based information flow management **between** central **server** and remote unit e.g. laptop or desktop computer or personal digital assistant (PDA), including management of controls, calendars, document management, instant massaging, PDA **synchronization**, file transfers, reminders, etc., in organization...  
...Title Terms: **UPDATE** ;

17/3,K/36 (Item 18 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015296062 \*\*Image available\*\*  
WPI Acc No: 2003-356996/200334  
XRPX Acc No: N03-285245

**Data synchronization center has controller which controls signal transmission to client terminal based on result of transmission by data transmission unit**

Patent Assignee: FUJITSU LTD (FUIT )  
Inventor: OGAWA A; MORI S  
Number of Countries: 028 Number of Patents: 003  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1294155	A2	20030319	EP 20021221	A	20020117	200334 B
US 20030055996	A1	20030320	US 200254353	A	20020122	200334
JP 2003091447	A	20030328	JP 2001283421	A	20010918	200334

Priority Applications (No Type Date): JP 2001283421 A 20010918

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 1294155	A2	E 19	H04L-029/06	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR

US 20030055996	A1	G06F-015/16
JP 2003091447	A	13 G06F-012/00

**Data synchronization center has controller which controls signal transmission to client terminal based on result of transmission...**

Abstract (Basic):

... A signal transmission unit in a data server (20), sends a signal for checking the **synchronization** of the **updated** data in the server and a client terminal (10), at predetermined timing to the client...  
... 1) data **synchronization** system...

...3) data **synchronization** method...

...To achieve **synchronization** between client terminal and server...

...Information held by the client terminal is **updated** and **synchronization between a server** and the client is maintained and the cost for maintaining is reduced. Enables the reduction of communication costs for **synchronization** check. Observation for checking and maintaining the data are readily performed by the client terminal...

...Title Terms: **SYNCHRONISATION** ;

17/3,K/37 (Item 19 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015240454 \*\*Image available\*\*  
WPI Acc No: 2003-301380/200329  
XRPX Acc No: N03-239749

Device for automatic configuration of user profiles on terminals in a telecommunications/data network has multiple application servers and a profile server for administering, storing and updating user profiles.

Patent Assignee: SIEMENS AG (SIEI )

Inventor: PREHOFER C

Number of Countries: 025 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200326246	A1	20030327	WO 2002DE3224	A	20020902	200329 B
DE 10144023	A1	20030403	DE 1044023	A	20010907	200331

Priority Applications (No Type Date): DE 1044023 A 20010907

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200326246 A1 G 25 H04L-029/06

Designated States (National): CN US

Designated States (Regional): AT BE BG CH CY CZ DE DK EE ES FI FR GB GR

IE IT LU MC NL PT SE SK TR

DE 10144023 A1 H04L-012/16

Device for automatic configuration of user profiles on terminals in a telecommunications/data network has multiple application servers and a profile server for administering, storing and updating user profiles.

Abstract (Basic):

... A profile server (PS) (11) administers, stores and updates user profiles. It has a synchronizing unit (14a) to synchronize between the profile server and multiple application servers (10). The PS has a duplicating unit (14b) to mirror user profiles for all users...

... user in different networks one on top of the other, especially for the purpose of synchronization or duplication...

... Synchronizing unit (14a

...Title Terms: UPDATE ;

17/3,K/38 (Item 20 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

015151997 \*\*Image available\*\*  
WPI Acc No: 2003-212524/200321  
XRPX Acc No: N03-169358

Failed synchronization session recovery method involves generating server request including update manifest, based on client request, synchronization state associated with failed prior synchronization session

Patent Assignee: MICROSOFT CORP (MICT )

Inventor: CHEN J S L; FLANAGIN S D; MOORE B

Number of Countries: 027 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1271321	A1	20030102	EP 200213765	A	20020620	200321 B
US 20030005161	A1	20030102	US 2001893170	A	20010627	200321

Priority Applications (No Type Date): US 2001893170 A 20010627

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1271321	A1	E	21	G06F-011/14	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT					
LI LT LU LV MC MK NL PT RO SE SI TR					
US 20030005161	A1			G06F-015/16	

**Failed synchronization session recovery method involves generating server request including update manifest, based on client request, synchronization state associated with failed prior synchronization session**

Abstract (Basic):

... A server request (352) including an **update** manifest, is generated based on client request (324), **synchronization** state associated with the failed prior **synchronization** session and sent to an information server (310). The **synchronization** state **between** the **server** and a client's mobile device (320), is modified based on the response received from...

... 1) Computer-readable medium storing failed **synchronization** session recovery program; and...

...2) Failed **synchronization** session recovery system...

...For recovering from a failed **synchronization** session between mobile computing device and information server...

...Allows the failed **synchronization** session to be recovered easily without requiring a server to maintain and track errors of...

...explicit acknowledgement from the client and without other time consuming and bandwidth intensive tasks. The **update** manifest included in the server request, allows the mobile data and server data to become **synchronized** efficiently without duplicating objects in either location and without sending client errors to the server...

...The figure shows the functional block diagram of the failed **synchronization** session recovery system...

...Title Terms: **SYNCHRONISATION** ;

17/3,K/39 (Item 21 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.

014955840 \*\*Image available\*\*  
WPI Acc No: 2003-016354/200301  
XRPX Acc No: N03-012274

**Network system has log-in ID changing unit that repeatedly searches from several log-in IDs stored in memory and accordingly updates log-in ID to memory at predetermined interval**

Patent Assignee: DAINIKKO ENG KK (DAIN-N); DI NIKKO ENG KK (NIKK-N)

Inventor: YAMAGUCHI Y

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020112059	A1	20020815	US 2001876711	A	20010607	200301 B
JP 2002236633	A	20020823	JP 200133272	A	20010209	200301
JP 3427380	B2	20030714	JP 200133272	A	20010209	200347

Priority Applications (No Type Date): JP 200133272 A 20010209

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020112059	A1		13	G06F-015/16	
JP 2002236633	A		9	G06F-013/00	
JP 3427380	B2		10	G06F-013/00	Previous Publ. patent JP 2002236633

... changing unit that repeatedly searches from several log-in IDs stored in memory and accordingly updates log-in ID to memory at predetermined interval

Abstract (Basic):

... system has a client (2) and server, each having a clock synchronous unit (14) to **synchronize** the system clock to the Internet standard time. A log-in ID changing unit (13) searches repeatedly from several log-in IDs stored in a memory and accordingly **updates** the ID at predetermined intervals on the memory as the most current log-in ID.

... For connecting **client** and **server** through Internet...

...Since the log-in IDs are **updated** at predetermined interval, the performance and reliability of the computer system are improved and a

...

...The figure shows the block diagram of **client** and **server** .

...Title Terms: **UPDATE** ;

17/3,K/40 (Item 22 from file: 350)  
 DIALOG(R)File 350:Derwent WPIX  
 (c) 2004 Thomson Derwent. All rts. reserv.

014929068 \*\*Image available\*\*  
 WPI Acc No: 2002-749777/200281  
 XRPX Acc No: N02-590455

**Internet based partially automated bookkeeping for accounting, involves using server data representing instructions for transactions, in banking service application and for updating bookkeeping database**

Patent Assignee: CAPAX IAS AB (CAPA-N); NILSSON M (NILS-I)

Inventor: NILSSON M

Number of Countries: 027 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020111903	A1	20020815	US 2001780504	A	20010212	200281 B
EP 1231553	A1	20020814	EP 2001103217	A	20010212	200281 N

Priority Applications (No Type Date): US 2001780504 A 20010212; EP 2001103217 A 20010212

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020111903	A1		8	G06F-017/60	
EP 1231553	A1	E		G06F-017/60	

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

... accounting, involves using server data representing instructions for

transactions, in banking service application and for updating  
bookkeeping database

Abstract (Basic):

... application (21) are provided to a server (2), accessible to a client (1) through a **network** (4). **Server** data representing instructions for transaction are used in the banking service application for conducting the transaction. A portion of the data is used as accounting information for **updating** a bookkeeping database (6).

... since fewer data entries are required. The bookkeeping database and the account balance are automatically **synchronized**, as the same data are used, thus making the audit process easier and less costly. Facilitates **updating** and maintenance of the account service application. Enables several clients to access the same bookkeeping...

...Title Terms: **UPDATE** ;

?

File 696:DIALOG Telecom. Newsletters 1995-2004/Apr 02  
(c) 2004 The Dialog Corp.  
File 15:ABI/Inform(R) 1971-2004/Apr 03  
(c) 2004 ProQuest Info&Learning  
File 98:General Sci Abs/Full-Text 1984-2004/Apr  
(c) 2004 The HW Wilson Co.  
File 484:Periodical Abs Plustext 1986-2004/Mar W4  
(c) 2004 ProQuest  
File 553:Wilson Bus. Abs. FullText 1982-2004/Apr  
(c) 2004 The HW Wilson Co  
File 813:PR Newswire 1987-1999/Apr 30  
(c) 1999 PR Newswire Association Inc  
File 613:PR Newswire 1999-2004/Apr 04  
(c) 2004 PR Newswire Association Inc  
File 635:Business Dateline(R) 1985-2004/Apr 03  
(c) 2004 ProQuest Info&Learning  
File 810:Business Wire 1986-1999/Feb 28  
(c) 1999 Business Wire  
File 610:Business Wire 1999-2004/Apr 05  
(c) 2004 Business Wire.  
File 369:New Scientist 1994-2004/Mar W4  
(c) 2004 Reed Business Information Ltd.  
File 370:Science 1996-1999/Jul W3  
(c) 1999 AAAS  
File 20:Dialog Global Reporter 1997-2004/Apr 05  
(c) 2004 The Dialog Corp.  
File 624:McGraw-Hill Publications 1985-2004/Apr 02  
(c) 2004 McGraw-Hill Co. Inc  
File 634:San Jose Mercury Jun 1985-2004/Apr 03  
(c) 2004 San Jose Mercury News  
File 647:CMP Computer Fulltext 1988-2004/Mar W3  
(c) 2004 CMP Media, LLC  
File 674:Computer News Fulltext 1989-2004/Mar W3  
(c) 2004 IDG Communications

Set	Items	Description
S1	100	REPLICA?(1W) (UPDAT???? ? OR UP() (DATE? ? OR DATING?)) (1W)V- ECTOR? OR RUV OR RUVS
S2	2047805	SERVER? ? OR HOST? ? OR MAINFRAME? ? OR MAIN()FRAME? ? OR - RAS OR MAILSERVER? OR WEBSEVER? OR FILESERVER? OR HTTPSERVER?
S3	46188	(MANY OR MULTI OR SEVERAL OR PLURALIT? OR MULTIPLE OR NUME- ROUS OR DIFFERENT OR ACROSS OR MULTITUD? OR PLURIF? OR SECOND OR BOTH) (1W)S2
S4	76879	(BETWEEN OR VARIOUS OR VARIETY OR GROUP? ? OR CLUSTER? OR - NUMBER OR PAIR??? ? OR TRIO OR SET? ? OR NETWORK? ? OR CHAIN? ?) (1W)S2
S5	27106	(SERIES OR ANOTHER OR TWO OR THREE OR COLLECTION? OR DUAL - OR RANGE) (1W)S2
S6	184604	(CONSUMER? ? OR USER? ? OR BUYER? ? OR PATRON? ? OR PURCHA- SER? OR CUSTOMER? OR SHOPPER? OR CLIENT? ? OR ESHOPPER? OR RE- QUEST?R? ? OR MEMBER? ?) (1W)S2
S7	7465	(SUPPLIER? OR SELLER? OR DEALER? OR VEND?R? ? OR BROKER? ? OR TRANDER? ? OR MERCHANT? ? OR AGENT? ? OR RESELLER? OR DIST- RIBUT?R? ? OR RETAILER? OR MANUFACTURER?) (1W)S2
S8	27	TRADER? ?(1W)S2
S9	161599	SYNC???? ? OR HOTSNC? OR DATASYNC? OR SYNCHRONIS??????? ? - OR SYNCHRONIZ?????? ?
S10	1435353	UPDAT???? ? OR UP() (DATE? ? OR DATING?)
S11	10485	S3:S8(S)S9:S10
S12	0	S1(S)S11
S13	3987	S3:S8(S)S9



S14 7047 S3:S8(S)S10  
 S15 466 S13(S)S14  
 S16 204 S15(S)S6  
 S17 4 S15(S)S7  
 S18 5443911 REPLICAT? OR COPY? OR COPIE? ? OR DUPLICAT? OR REPRODUC? OR  
 RECREAT? OR RECONSTRUCT? OR MIRROR? OR CLON??? ? OR REGENERAT?  
 S19 1017962 S18(2N) (DATA OR INFORMATION OR OBJECT? ? OR MESSAGE? OR FI-  
 LE? ? OR CONTENT OR ECONTENT OR RECORD? ? OR REPORT? ?)  
 S20 100 S15(S)S19  
 S21 44 S16(S)S19  
 S22 594 S11(S)S19  
 S23 44 S22(S)S16  
 S24 2500 S3:S8(15N)S9  
 S25 3206 S3:S8(15N)S10  
 S26 174 S24(S)S25  
 S27 32 S26(S)S19  
 S28 71 S17 OR S21 OR S23 OR S27  
 S29 7 S28/2002:2004  
 S30 64 S28 NOT S29  
 S31 55 RD (unique items)

31/3,K/1 (Item 1 from file: 15)  
 DIALOG(R)File 15:ABI/Inform(R)  
 (c) 2004 ProQuest Info&Learning. All rts. reserv.

02233921 82785730  
**Eprise offers Content Deployment Suite**  
 Anonymous  
 Econtent v24n8 PP: 12 OCT 2001  
 ISSN: 1525-2531 JRNL CODE: DTB  
 WORD COUNT: 222

...TEXT: Deployment Suite (ECDS). ECDS is a content deployment service that automatically and securely restores and **synchronizes** dynamic content, which has been created and approved from a central Eprise authoring server across **multiple** deployment **servers**. ECDS enables online businesses to restore, **replicate**, and distribute **content** globally across a heterogeneous Web site infrastructure for fast delivery. Combined with the Eprise Participant...

... creation, management, and distribution. In an Eprise-managed Web environment, ECDS can be used to **replicate content** throughout a local server farm to support large sites or to **duplicate content** from a central authoring server to other geographically dispersed Web servers. With ECDS, users' interaction on the site will be uninterrupted by **updates**, as **multiple servers** can receive new content without being taken offline. Clients will also be able to automate content distribution across **multiple**, dispersed **servers**. ECDS enables rules and quality levels to be defined for **content replication** before **updates** are published. Through a licensing agreement with Inktomi Corp., Eprise incorporated technology from the Inktomi...

31/3,K/2 (Item 2 from file: 15)  
 DIALOG(R)File 15:ABI/Inform(R)  
 (c) 2004 ProQuest Info&Learning. All rts. reserv.

02192303 73290113  
**Inktomi makes sense of complex content**  
 Notess, Greg R

Econtent v24n4 PP: 60-61 Jun 2001  
ISSN: 1525-2531 JRNL CODE: DTB  
WORD COUNT: 1037

...TEXT: component. These can be purchased separately, but are typically packaged together in the suite. The **Content** Distributor can **replicate content updates** to a whole **collection of servers** while **synchronizing the updates** to make sure that the new content is available on all the servers at the...

31/3,K/3 (Item 3 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2004 ProQuest Info&Learning. All rts. reserv.

01579770 02-30759  
**Today's window of exposure for data loss**  
Buffington, Jason L  
Computer Technology Review Storage Inc. Supplement PP: 74-81 Winter 1997  
ISSN: 0278-9647 JRNL CODE: CTN  
WORD COUNT: 3189

...TEXT: the business day.

There are two definitions for "Application Replication". The first refers to the **synchronization** of data **between client server** engines. We have already discussed this model (see clustering section above). The other definition that is also known as "**file replication**" refers to a different methodology of high availability-the idea of monitoring application files for...

... marks a file as changed (e.g. archive bit or time stamp), then some process **copies the file** to a **second server**. This has the high availability potential of being able to stand in for the failed production server and the backup possibility of providing for backing up the second **copy of the data**, at will. In fact, some variations of this technology merge the two concepts by storing...

...the file is multi-user file (e.g. a database), then every time any user **updates any single cell**, a copy of the whole file will be sent to the **second server** ! Theoretically, the file could literally be streamed back to back with itself, over and over...

31/3,K/4 (Item 4 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2004 ProQuest Info&Learning. All rts. reserv.

01321849 99-71245  
**D-Day: Microsoft plans its Normandy invasion**  
Foley, Mary Jo  
Computer Reseller News n706 PP: 111-112 Oct 21, 1996  
ISSN: 0893-8377 JRNL CODE: CRN  
WORD COUNT: 647

...TEXT: s ActiveX Server Scripting environment, will be the mechanism for customizing content.

Microsoft's forthcoming **Content Replication Server** will enable customers to keep **multiple servers** and sites in **synch** by providing

in-place HTML updates and single-button publishing on staging servers.

The Information Retrieval Server will provide full-text...

31/3,K/5 (Item 5 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2004 ProQuest Info&Learning. All rts. reserv.

01303788 99-53184  
**Novell to ease file access replication service**  
Burns, Christine  
Network World v13n41 PP: 12 Oct 7, 1996  
ISSN: 0887-7661 JRNL CODE: NWW  
WORD COUNT: 343

...TEXT: give end users access to files even if the server they typically access is down. " Synchronized replication lets you go to another server and get an updated copy of the files you need to work with," he said.

Neil MacDonald, an analyst with Gartner Group, Inc...

31/3,K/7 (Item 7 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2004 ProQuest Info&Learning. All rts. reserv.

01268067 99-17463  
**Becton Dickinson synchronizes sales unit**  
Porter, Patrick  
Software Magazine v16n8 PP: 64 Aug 1996  
ISSN: 0897-8085 JRNL CODE: SMG  
WORD COUNT: 677

...TEXT: 12Mb of RAM and 14.4Kbits/sec modems. A new SQL Anywhere feature, SQL Remote, updates and synchronizes the data on the clients with host data on sales, marketing and customer service that resides on several AS/400 systems at headquarters. BD Mobile replicates new data from the field to the host via Lotus cc:Mobile E-mail. Each day, BD...

31/3,K/9 (Item 9 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2004 ProQuest Info&Learning. All rts. reserv.

00956492 96-05885  
**Oracle extends replication capabilities**  
Ricciuti, Mike  
InfoWorld v16n52,1 PP: 3 Dec 26, 1994/Jan 2, 1995  
ISSN: 0199-6649 JRNL CODE: IFW  
WORD COUNT: 376

...TEXT: for use across Oracle's lineup.

Among the new replication capabilities is a feature called Update Anywhere Replication, first promised more than a year ago. Update Anywhere lets users at multiple Oracle server sites update copies of the same data, while all copies are automatically kept in sync. Changes are reconciled and then propagated via replication to all sites where copies

of the **data** are stored.

Currently, Oracle databases support replication only though snapshots, or static copies of data...

31/3,K/13 (Item 1 from file: 484)  
DIALOG(R)File 484:Periodical Abs Plustext  
(c) 2004 ProQuest. All rts. reserv.

05061636 SUPPLIER NUMBER: 73258601 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**The state of the art in distributed query processing**  
Kossmann, Donald  
ACM Computing Surveys (ACI), v32 n4, p422-469, p.48  
Dec 2000  
ISSN: 0360-0300 JOURNAL CODE: ACI  
DOCUMENT TYPE: Feature  
LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 21807

TEXT:

... illustrate this principle, Figure 17 shows a network with ten servers. In this network, an **object** is **replicated** at Servers 5, 6, and 7 (shaded in Figure 17). Even if the object is rarely accessed by the **clients** of **Server 6**, the object should nevertheless be replicated at **Server 6** if it is replicated at Servers 5 and 7. When the object is **updated** by a **client** of **Server 5**, then this **update** must be propagated via **Server 6** to **Server 7** so that the extra **copy** of the **object** at **Server 6** can be kept consistent without any additional communication cost. Likewise, **Server 6's copy** of the **object** can be kept consistent with no additional communication cost if the **update** originates at a **client** of **Server 7, 8, 9, or 10**. If the object is read regardless where, the **copy** of the **object** at **Server 6** does not hurt either.

Based on this principle, the ADR algorithm expands...

31/3,K/14 (Item 1 from file: 813)  
DIALOG(R)File 813:PR Newswire  
(c) 1999 PR Newswire Association Inc. All rts. reserv.

1288246 SFM040  
**Comprehensive Content Replication and Distribution Module Added to Atrave's WebSpective Solution**

DATE: June 8, 1998 08:04 EDT WORD COUNT: 876

... Content Distributor enables the deployment of such an architecture by providing automated mechanisms for seamless **content** distribution and **replication** from the staging area to **multiple Web servers**. The Content Distributor allows Web administrators to synchronize their **content replication** and distribution in real-time **across live servers** and through firewalls while gracefully redirecting users during **updates**. Web site administrators schedule the timing of the updates, which can be made as frequently...

31/3,K/15 (Item 2 from file: 813)  
DIALOG(R)File 813:PR Newswire  
(c) 1999 PR Newswire Association Inc. All rts. reserv.

0890196

SETU012

**MICROSOFT ANNOUNCES RELEASE CANDIDATE FOR MICROSOFT EXCHANGE SERVER**

DATE: December 5, 1995

16:19 EST

WORD COUNT: 782

...For example, a sales executive can use a customer-tracking application on a business trip, **update** it based on customer calls during the trip, then use local replication to **synchronize both the server and local versions** of the application. Local replication is better than merely **copying** a 1 file onto a local PC because the off-line folder that contains the application understands its...

31/3,K/16 (Item 3 from file: 813)

DIALOG(R)File 813:PR Newswire

(c) 1999 PR Newswire Association Inc. All rts. reserv.

0859450

**NOVELL CONTINUES ITS COMMITMENT TO ADVANCE ITS INDUSTRY-STANDARD NETWORK DIRECTORY SERVICES**

DATE: September 13, 1995

15:34 E.T.

WORD COUNT: 789

...Services by updating information more quickly and accurately across enterprise environments. Enhanced data tracking and **synchronization** processes allow an administrator to monitor **replication information across servers**. These **updated** processes record network events that affect directory **synchronization** and integrity, such as the temporary failure of a wide-area communication link.

The NDS...

31/3,K/22 (Item 1 from file: 810)

DIALOG(R)File 810:Business Wire

(c) 1999 Business Wire . All rts. reserv.

0774183 BW1329

**LINKPRO TECH INC: Windows NT Server to Server Data Replication Enhanced in PowerSync 4.0**

November 17, 1997

Byline: Business Editors and High-Tech Writers

...can be centrally managed by system administrators utilizing one-to-many and many-to-many **data replication and synchronization between servers** on LANs and WANs.

PowerSync 4.0 provides content **updates**, data protection and user load balancing for networked Windows NT and NetWare Servers. "With the...

? t31/3,k/23,31-33,36-37,40

31/3,K/23 (Item 1 from file: 610)

DIALOG(R)File 610:Business Wire

(c) 2004 Business Wire. All rts. reserv.

00619260 20011112316B2174 (USE FORMAT 7 FOR FULLTEXT)  
**Mykenae Admits to the CRN Test Center Review and Announces General Availability of the Perseus DNA technologies at COMDEX Fall 2001**  
Business Wire  
Monday, November 12, 2001 10:03 EST  
JOURNAL CODE: BW LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT  
DOCUMENT TYPE: NEWSWIRE  
WORD COUNT: 468

...best able to handle a user's request. It enables organizations to optimize their enterprise **network servers** availability, **synchronization**, and performance and cost-effectively manage their web infrastructure. Perseus DNA also enables effective **data replication** and synchronization in a variety of network environments. The built-in **content replication** capability enables network managers to increase access to content by capturing and storing content at points **between** production **servers** and end-users. This technology ensures the newly published or **updated** files and applications are replicated across all target servers.

At COMDEX Fall 2001, Mykenae also...

31/3,K/31 (Item 3 from file: 647)  
DIALOG(R)File 647:CMP Computer Fulltext  
(c) 2004 CMP Media, LLC. All rts. reserv.

01140851 CMP ACCESSION NUMBER: NWC19971001S0025  
**RFP: Corporate Intranets - 4 Vendors Provide Their Solutions**  
Brian Walsh  
NETWORK COMPUTING, 1997, n 818, PG56  
PUBLICATION DATE: 971001  
JOURNAL CODE: NWC LANGUAGE: English  
RECORD TYPE: Fulltext  
SECTION HEADING: Features  
WORD COUNT: 6094

... Netscape recommends taking a DNS round-robin approach to load-balance Web-page hits across **two** file **servers** that in turn are updated via rdist (a Unix background process that maintains **copies** of **files** on **multiple** **hosts**) to maintain **synchronization** between the two file systems; Netscape would create a DNS round-robin for each server...

31/3,K/32 (Item 4 from file: 647)  
DIALOG(R)File 647:CMP Computer Fulltext  
(c) 2004 CMP Media, LLC. All rts. reserv.

01107126 CMP ACCESSION NUMBER: CRN19961021S0111  
**D-Day: Microsoft Plans Its Normandy Invasion**  
Mary Jo Foley  
COMPUTER RESELLER NEWS, 1996, n 706, PG111  
PUBLICATION DATE: 961021  
JOURNAL CODE: CRN LANGUAGE: English

RECORD TYPE: Fulltext  
SECTION HEADING: Software - Applications, Platforms & Tools  
WORD COUNT: 662

... s ActiveX Server Scripting environment, will be the mechanism for customizing content.

Microsoft's forthcoming Content Replication Server will enable customers to keep multiple servers and sites in synch by providing in- place HTML updates and single-button publishing on staging servers.

The Information Retrieval Server will provide full-text...

31/3,K/33 (Item 5 from file: 647)  
DIALOG(R)File 647:CMP Computer Fulltext  
(c) 2004 CMP Media, LLC. All rts. reserv.

01058289 CMP ACCESSION NUMBER: CWK19950710S0059  
Elan Ships Gateway to GoldMine - GoldSync software provides data replication for remote users across vendor's enterprise network (In Brief)  
TALILA BARON  
COMMUNICATIONSWEEK, 1995, n 565, PG35  
PUBLICATION DATE: 950710  
JOURNAL CODE: CWK LANGUAGE: English  
RECORD TYPE: Fulltext  
SECTION HEADING: Mobile Computing  
WORD COUNT: 341

The company's GoldSync Remote Synchronization Gateway provides data replication between multiple sites, hosts and users across an enterprise network at predesignated time intervals. That lets managers make sure updated information is available to users in the field, according to the Pacific Palisades, Calif., company...

31/3,K/36 (Item 8 from file: 647)  
DIALOG(R)File 647:CMP Computer Fulltext  
(c) 2004 CMP Media, LLC. All rts. reserv.

00572583 CMP ACCESSION NUMBER: CRN19900625S0399  
3Com: Directory services - Firm announces global naming product for LAN Manager  
SUKETU MEHTA  
COMPUTER RESELLER NEWS, 1990, n 374, 49  
PUBLICATION DATE: 900625  
JOURNAL CODE: CRN LANGUAGE: English  
RECORD TYPE: Fulltext  
SECTION HEADING: NET  
WORD COUNT: 565

... There is no real limit to N-part names," Eng said.  
The directory service automatically synchronizes directory updates across the network. Replication of data on multiple servers across the global network gives users virtually uninterrupted access to directory information, even if there...

31/3,K/37 (Item 1 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2004 IDG Communications. All rts. reserv.

093487

**The long arm of the LAN**

**Extend the reach of your workstation management with mobile administration software.**

Byline: TRAVIS BERKLEY, NETWORK WORLD GLOBAL TEST ALLIANCE

Journal: Network World Page Number: 99

Publication Date: May 07, 2001

Word Count: 5227 Line Count: 461

**Text:**

... for our comparisons: software deployment, application self-healing, hardware and software inventory, file backup or **synchronization**, and remote-control capabilities (see "How we did it," page 104). We gave the Blue...

... version of Windows. Xcellenet plans to merge these two products in future versions of Afaria. Both **servers** run on Windows NT or 2000, and communicate with the remote clients via Microsoft 's...

... connection. This is best used for your most important function, such as a virus definition **update** or your inventory collection. Software Management lets you distribute and maintain applications and files. Applications... as well as whether they can be changed. New versions of documents can also be **updated** automatically. For example, a publications group that keeps its catalog in PDF can publish the...

... workstations. But things didn't go quite as smoothly with our Palm III units. Sometimes **HotSync** would crash during **updates**, especially after software distributions. Worse yet, when trying to connect the Palm to the Afaria...

... a little off the score for our Palm difficulties and the current requirement of needing **two servers**. Vision64Swan 's Vision64 manages only Windows machines, but the company plans to expand into the...

... Intermediate Servers can have administrative functions on them, or can be collection and distribution points. **Collection Servers** package the software distributions, which are stored on the other servers for delivery. This may...

... Smaller organizations may only need one central Master Server and can choose to put the **Collection Server** on the same box. But Vision64 gives much larger corporations the ability to distribute services...

... push them to specific directories on the client machines. However, Vision64 can also use its **Collection Servers** to take "snapshots" and package applications. A snapshot of the laptop is taken before and immediately after the installation of an application. The **Collection Server** then compares the two snapshots to determine what needs to be sent. This includes new files, differences in existing files and even registry **updates** and changes. Vision64 uses "integrity control" to periodically check these software distributions for accuracy. If...

...files, or it can assume that if the file is newer it is an acceptable **update**. Another handy feature is how Vision64 can deliver these packages. You can transfer them to...bytes of free space), off it goes. You can also create query groups that are **updated** on a schedule. For example, you can have Orbiter find machines that have low disk...

... a job for those machines to purge temporary files once a day. Software



delivery can **copy files** or maintain that distribution. You can send an installer package and have it launch automatically...distribution.The Orbiter client is also capable of managing Palm OS devices, as long as **HotSync** is installed on the machine. It will push a small (17K byte) agent to the Palm device. During a **HotSync**, if inventory jobs run, the agent collects the hardware information and catalogs what software is...  
... in the same place, using the same tool.iMobile Suite is built around keeping data **synchronized**. There are functions for delivering and retrieving files from clients, regardless of their platform. iMobile...

...makes it easy to run the job at any time, or on a schedule. The **client** and **server** use compression when sending files to ease the bandwidth required.It is also easy for...

... restored.Another noteworthy feature, but just outside the scope of our review, is the Data **Sync** Server portion of iMobile Suite. For those applications that use databases (sales quote programs, for example) it is important for those database changes to be **synchronized** with the home office. You can define applications for which the iMobile client will keep the remote database **synchronized** with a central version.Also, the iMobile Suite server can capture a Web site and...

... at the user, then select the inventory properties to see the machine information. It will **update** this with the information from the last machine they logged on from, or the last...Also, the server can send things to the PDA and store them until the next **sync**. Mobile Automation 2000 can use an Oracle, Microsoft SQL server or Access database to store...

... the Command Server and register, they can be assigned to Secondary Servers on their local **network**. Relay **Servers** can be sent packages defined by the Command Server, giving clients nearby repositories to use...

... get software and files to remote users. If the application is small enough, you can **copy files** to the remote workstations. This would also be a handy way to distribute virus definition **updates**, spreadsheets or other documents to keep current. If it is an application that is packaged ...

...it will replace what it needs to.If you choose, a log file can be **updated** each time a distribution is run, either by a push or by the Web interface... the functions are monitored whenever the user connects the PDA to their desktop/laptop to **synchronize**.Mobile Automation can handle multiple PDAs **synchronized** from one workstation. It takes a modest hardware inventory and some software inventory. It seems...

31/3,K/40 (Item 4 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2004 IDG Communications. All rts. reserv.

083673

**Freedom from IP address overload**

**Lucent's QIP Enterprise is the best tool for ending your IP addressing nightmare.**

Byline: BARRY NANCE, NETWORK WORLD TEST ALLIANCE

Journal: Network World Page Number: 67

Publication Date: May 01, 2000

Word Count: 2978 Line Count: 281

Text:

Not so long ago, network managers would assign and manage IP addresses by

manually **updating** tab-delimited HOSTS text files of static addresses and then distribute the resulting files throughout the company. Network administrators would put **copies** of the **files** in the appropriate directories for each server and each client. Many of these same companies ...

... Enterprise ensured that IP address leases weren't orphaned or reassigned. It sent lease information **updates** to other primary or secondary DNS servers and recorded the address assignments in its central ...

... that uses Dynamic DNS to accomplish the zone transfer, and keep master and slave servers **synchronized**. QIP Enterprise periodically performs full zone transfers as a backup mechanism. In our lab, the...DNS/DHCP servers in the lab, and Check Point extended the BIND reference code to **replicate** all lease **information** between primary and secondary DHCP servers. Check Point markets two configurations of Meta IP: Meta...

... A DHCP server that randomly assigns addresses is only slightly better than distributing a manually **updated** HOSTS file. Fortunately, these DNS/DHCP products offered many ways to associate an IP address...and consultant for 29 years, is the author of Introduction to Networking, 4th Edition and **Client / Server LAN Programming**. His e-mail address is barryn@erols.com.

?

PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES

? t31/3,k/41,46-50,53

31/3,K/41 (Item 5 from file: 674)

DIALOG(R)File 674:Computer News Fulltext

(c) 2004 IDG Communications. All rts. reserv.

082487

**Remote control hardware options**

**Vendor-specific add-on cards outperform stand-alone devices.**

Byline: JOHN BASS, NETWORK WORLD TEST ALLIANCE.

Journal: Network World Page Number: 53

Publication Date: March 27, 2000

Word Count: 2819 Line Count: 250

Text:

... solutions for remotely managing your servers: a vendor-specific add-on card installed into the **vendor's server**, or an external stand-alone box - basically a PC with an additional card for keyboard...

... power. The downside is that these cards typically can only manage the host server, not **multiple servers**. The external server management products are scalable by connecting to a KVM switch. The devices...

... switch. Our Key-View II was shipped with a KVM switch that can connect to **many servers**. Remote console access into the Key-View II is made via Symantec's pcAnywhere. FeaturesOf...with the server.A unique feature of the Emerge product is the ability to have **several servers** 'displays open at once, although only an active screen in an active window is **updated**. Ease of useConnecting to the internal cards is relatively easy. To connect to the Compaq...

...There is an annoying procedure to make the local mouse cursor and remote mouse cursor **synchronize**. The remote mouse speed must be set to the lowest setting, then you have to hit F9 or else the cursors won't **synchronize**. This is further complicated because the mouse speed setting

can change depending on the user...the Key-View II operate with server management systems. The Emerge 2000 could connect to **many servers** with the Outlook KVM switch. Because there is no switch user configuration or centralized server...

...HP and Compaq servers, the HP and Compaq cards are the most inexpensive. As the **number of servers** increase, the economics change. The Apex Emerge 2000 is the most inexpensive solution with more than **three servers**. The HP TopTools card is the most expensive with more than six servers. The Compaq...

31/3,K/46 (Item 10 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2004 IDG Communications. All rts. reserv.

048328

**Briefs**

**Briefs**

**Briefs**

Byline: Briefs

Journal: Computerworld Page Number: 72

Publication Date: November 20, 1995

Word Count: 202 Line Count: 20

Text:

... of different types of goods across multiple manufacturing sites. Manugistics also announced a three-tier **client / server** architecture that enables users at remote sites to access and **update** all supply chain data without having to **replicate data** or **synchronize** databases. In September, SAP AG and Manugistics announced an alliance whereby SAP R/3 users...

31/3,K/47 (Item 11 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2004 IDG Communications. All rts. reserv.

046734

**Novell's Enterprise NOS**

**SPECIAL SECTION, Novell, NetworkWorld Review**

**With NetWare 4.1, Novell grows up from its workgroup roots.**

Byline: John Allen, Tony Croes, Howard Marks and Josh Penrod

Journal: Network World Page Number: 63

Publication Date: September 11, 1995

Word Count: 3483 Line Count: 325

Text:

... administrator, a directory allows the network to appear as a single unit instead of a **collection of servers**. For the user, logon occurs only once to access the data, applications and services to...

... to be. Highly available The NDS database can be split into replicas and placed on **different servers**. Any section of the database can be replicated to provide layers of redundancy. If a...

... that contains part of the NDS database goes down, a replica of that section on **another server** can take over until the first server comes back on-line. This partitioning can either... its shared file/shared directory message store, and GroupWise, with its in-telligent message

transfer **agent** and **server** -based rules. Novell's messaging migration strategy calls for the company to combine the current Novell messaging products into one, with a **client** / **server** -based object store. GroupWise XTD is slated to arrive early next year (see story). Today...

... messaging server object (usually servername MSG.NDSTreeName) and adds the server to an MHS Routing **Group**. **Servers** in the same routing group exchange messages and directory information. Two NetWare Loadable Modules (NLM...

... via an add-on module for NWADMIN called the NetWare Integration Module, or with a **synchronization** NLM called NGWSYNC. The integration module allows an administrator to assign and manage GroupWise mailboxes...for use by the other consoles. They can use the data, but they should not **update** it. The abundance and diversity of real-time data reported by the server agents about...in upper memory on the user's desktop. They allow Inventory Manager to collect and **update** information about the workstation, ensuring that the administrator has the current settings available to troubleshoot ...

... s user utilizing a split screen dialogue window to ask questions or deliver in-formation. **Copy** files from the workstation to the console for modification, and deliver them back to the workstation...

... highly recommends that the console software and database be stored locally instead of on a **network server**. If not, when that server is down, the ManageWise console can be of no help...

... in NDS. Using both, customers can consider the network a single unit instead of a **collection** of **servers** and configure their networks, and their directories, as they see fit. Likewise, Novell has a...

31/3,K/48 (Item 12 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2004 IDG Communications. All rts. reserv.

046432

**Third-party products helping users to bridge Notes information gap**

**Special Focus, LOTUS NOTES**

Byline: Barb Cole

Journal: Network World Page Number: 42

Publication Date: August 28, 1995

Word Count: 923 Line Count: 87

Text:

... data into the groupware application. While the Lotus software has built-in replication technology for **copying data** among **multiple Notes servers**, it lacks facilities to easily move data between Notes and other data sources. That's...

... desktop database, such as Microsoft Access, into Notes. Trinzic's InfoPump and IBI's Enterprise **Data** Access/SQL **Copy** Manager for Lotus Notes are aimed at the high end of the market and are...

... consulting services. Also in this high-end space is Casahl Technology's Replic-Action, which **copies data** across Notes and several relational databases; it became available last month. Unlike the Trinzic and...

...Sheshunoff Management Services, a bank consulting firm in Austin, Texas, said Notrix enabled him to **synchronize** 40 Notes databases running on

laptops with the company's main Oracle Corp. database. ``We use Notrix to pull nightly **updates** from Oracle and add them to the Notes databases on our consultants' laptops,' Roblee said...

... of America in Roselle, N.J., uses Trinzic's InfoPump to link Notes mail and **client / server** applications. Prudential's applications utilize a mainframe gateway, which tends to be unstable, so InfoPump...

31/3,K/49 (Item 13 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2004 IDG Communications. All rts. reserv.

044548

**Replication features readies for key Microsoft server, desktop databases**

Byline: John Cox

Journal: Network World Page Number: 12

Publication Date: May 29, 1995

Word Count: 680 Line Count: 64

**Text:**

...will let customers make replicas of database tables, automatically move them over a network to **multiple servers** and periodically **update** the copies in a controlled fashion. The Access replication feature will make it easier for individual users and small workgroups - the mainstay Access users - to share **information**. Overall, **replication** is seen as the linchpin in unifying workgroup and corporate data. Initially, the databases will only **copy data** among their own kind: Access to Access and SQL Server to SQL Server. Eventually, via Microsoft's Open Database Connectivity (ODBC) interface, they will be able to **copy data** to and from any ODBC-compliant database, according to company officials. ``You can create one...

... Integra Technology International (formerly Midak International), a Tucson, Ariz., systems integrator specializing in Microsoft-based **client / server** systems. Integra deployed the beta version of SQL 6.0 and used the replication feature...

... TCP/IP WAN. A radio frequency LAN was created for the mobile stores. Warehouse inventory **data** is **replicated** from the warehouse to jail servers. Tables with inmate account **information** are **replicated** from the central cashiering server to the jail sites, which receive only the information about...

... and-click conventions to select database tables and drag them to the appropriate server icon. **Updates** can be scheduled with SQL Executive, formerly SQL Scheduler. Thinking about replication But replication is...

... Server replication facility lacks a program to handle conflicts if the same data is being **updated** simultaneously at different sites, according to Gary Voth, group product manager for SQL Server. Access will take advantage of some replication handler application interfaces in the Briefcase file **synchronizer** found in Windows 95. ``You drag an Access database file into Briefcase, which makes a...

31/3,K/50 (Item 14 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2004 IDG Communications. All rts. reserv.

044307

**DATA DELIVERY**

**Buyers's Guide**

**DBMS vendors boost power at high end, work on slimmed-down products for low end, and deliver on mid-range promises for replication and new data types.**

Byline: Colin White

Journal: Network World Page Number: 39

Publication Date: May 15, 1995

Word Count: 2763 Line Count: 258

**Text:**

... to use locally stored data and tap into larger enterprise servers without worrying about data **synchronization**. There has been less activity in the middle ground of the market. Vendors there are delivering on promises to add facilities for **data replication** and support for new data types to their traditional products used in departmental settings. With replication, DBMS servers can work with **copies** of shared **data**, improving performance and data availability. Support for new data types makes it possible for DBMS...

... on a PC or even a laptop. Personal DBMSs are ripe for applications that use **data copied** from servers in the network for desktop or mobile computing. The parallel extreme During the...

...end hardware as Sequent Computer Systems, Inc.'s SMP-based Symmetry 2000 and Symmetry 5000 **Series servers**. AT&T GIS, Oracle and Sybase have DBMS servers that run on such powerful hardware...the server, there are other DBMS tools that can improve the network performance of enterprise **client / server** applications. Passing SQL statements created on clients across the **network** to **servers** can give unacceptable performance. Using stored procedures on the DBMS server can help. With stored...

... departmental- and enterprise-level servers. DBMS stored procedures are not suitable to support application processing **across multiple servers**, especially if those servers are running different database products. The solution is to use application...

... or message-oriented middleware. This type of middleware provides more application flexibility for handling processing **across multiple servers** and has the benefit of being DBMS vendor-independent. The downside is increased application development...

... be looking at departmental servers that haven't changed much over the last year. Most **client / server** applications deployed to date will work well with departmental DBMS servers. Departmental applications typically employ...

... The new version is just entering production release and includes enhancements that significantly improve its **client / server** capabilities. IBM also will be coming out with a version of DB2 for Windows NT...

... often get lumped into asingle category, different implementations are suited for one of three uses: **copying data** among multiple operational systems that support daily business tasks; **copying data** from an operational system to an informational system that supports decision-support and trend analysis; and **copying data** for use by multiple informational systems. To date, most replication facilities support the first and second types of usage. When **replicating data** between operational systems, there is little requirement to clean or reformat the data because each system uses the same formats. The focus instead is on sharing the data among **multiple servers** and moving the

data to target systems as quickly as possible so all copies are...

... date. With this style of replication, there is strong interest in products that allow any **copy** of the **data** to be **updated** in a peer-to-peer manner. CA-OpenIngres pioneered this technique, introducing conflict-detection and...

... did not have the latest version of the data due to the asynchronous nature of **data replication**. Oracle recently introduced similar capabilities, as did Praxis International, Inc., which makes mainframe DBMSs and **data replication** tools. Other vendors are sure to follow. The use of peer-to-peer **updating** in replication products, however, is not for the inexperienced user and requires careful application design in order to ensure data **synchro**-nization. When **replicating data** from operational to informational systems, the emphasis is on capturing snapshots of the data at...

... today have fairly limited data cleansing and reformatting capabilities. Furthermore, they are limited to only **copying data** between relational DBMSs, making it im-possible to use these tools to build informational databases... operational systems do not provide historical or summary data. The solution is to reformat and **copy** the **data** to a separate data warehousing system that anchors the decision-support system. This allows data...

... marts managed by workgroup and departmental DBMS servers that contain slices, and sometimes summaries, of **data copied** from the enterprise warehouse. End users can then employ client workstations to access data from...

... being used to manage the warehouse support high-performance utilities for the loading and bulk **updating** of data. Equally important is the performance of facilities for creating indexes, doing database backup...

...This enables remote workers to act as full-fledged clients as opposed to carrying around **copies** of **data** that can quickly go out-of-date. With the exception of Oracle's Oracle in...

... the data in each DBMS server. And that requires careful selection of middleware for connecting **clients** to **servers**. White is president of DataBase Associates International, a consulting and educational company in Morgan Hill...

31/3,K/53 (Item 17 from file: 674)  
DIALOG(R)File 674:Computer News Fulltext  
(c) 2004 IDG Communications. All rts. reserv.

042996

More messaging options deliver selection headaches  
Buyer's Guide

As products are recast to give users more and better ways to send messages, net managers are left with the tough task of sorting through E-mail products.

Byline: Daniel Blum and Gary Rowe  
Journal: Network World Page Number: 53  
Publication Date: March 13, 1995  
Word Count: 3927 Line Count: 375

Text:

Delivery of **client / server** -based electronic mail tools is providing end

users more messaging options but giving the network...

...in the near future - make it possible to mix E-mail client software from one **vendor** with **server** -based message store software from another, something that was almost unheard of just a year...

... access Digital Equipment Corp. and Hewlett-Packard Co. E-mail servers. This move to a **client** / **server** architecture is intertwined with growing end-user demand to have messaging capabilities built into such...

... ongoing operational costs by enabling net managers to mix and match the best-of-breed **client** , **server** , directory and MTA products that are also scalable. For example, selecting products that have the...

... different offerings, net managers must first decide if they want to go with the fledging **client** / **server** tools now on the street from vendors such as Digital and HP, or wait for the likes of Lotus, Microsoft and Novell to complete their planned migrations to **client** / **server** messaging (see story, page 60). On the other hand, net managers can simply buy into ...

... the Internet is creeping in as a viable enterprise messaging option - one that follows the **client** / **server** paradigm (see story, page 61). Managers making this decision are doing so at a time...

... 1.5, or even on-line services such as MCI Communications Corp.'s MCI Mail. **Clients** and **servers** from different vendors can be mixed and matched more readily if they use open access...you should first determine if it's based on a shared-file or a true **client** / **server** architecture. Those using a shared-file architecture are mired in aging technology. With a shared...

... the receiving clients log on to check for new mail. Clients that fall into the **client** / **server** camp typically use a vendor proprietary protocol or a more open one, such as the...

...even pass messages directly to receiving clients when the client logs on to the server. **Client** / **server** techniques enable you to increase the number of clients that can be supported on a single server, reducing cost of ownership, improving performance and increasing reliability. While standards-based **client** / **server** protocol support is desirable, most **client** / **server** LAN E-mail systems still use a proprietary protocol. A few, such as ISA Corp...

... directory access method. Some clients use file sharing, but others utilize X.500 or proprietary **client** / **server** mechanisms to access a network operating system (NOS) or enterprise E-mail directory. Clients that ... holding back on changing clients for a year or more can expect to see increased **client** / **server** support, more advanced filtering facilities, broader MAPI support - at least in Windows environments - and increased...

... messaging and desktop operating environments. **SERVER TIPS** While more functionality is finding its way to **clients** , messaging **servers** are still responsible for critical message store, directory services and MTA operations. The first step in picking out a server is to evaluate its overall modularity. **Client** / **server** access should ideally be supported to the message store component or the directory. The message...

... multimedia messaging, you should seek out systems that, in addition to employing the more robust **client** / **server** approach, also support



components based on a scalable platform, such as Unix, OS/2 or...

...can be searched or sorted. It is just as important to look at how the **message** store **replicates** mailbox, bulletin board or discussion database information **across servers**. It's better to replicate just the changes to individual objects, or fields in objects, rather than the entire mailbox every time an **update** is done. Rules are also important but rare on the message stores listed in the...

...mail to become intelligent vehicles for group collaboration. In terms of a directory architecture, a **number** of **server** products such as Lotus cc:Mail, Microsoft Mail, GroupWise and DaVinci eMail currently use flat files that must be **synchronized between servers** using add-on products that can raise reliability and performance concerns. However, a number of ...

... run MTAs and gateways separately makes it hard to tell what's included with a **vendor's server** product line. Vendors such as Isocor, Enterprise Solutions, Ltd. and ISA may provide multiple protocol...MTA and X.500 directory products not listed by name. The blurring of the boundaries **between** some **server** and backbone product lines is also sometimes reflected in pricing. For example, the price listed...

... public-key encryption support as an option with their products. As the inevitable move to **client / server** messaging is made, expectations are high but realities are sometimes grim. While small businesses have... installed base or a strong desire to act now, consider buying one of the new **client / server** messaging products available from vendors such as Digital and HP or a number of Internet...

File 348:EUROPEAN PATENT 1978-2004/Mar W04

(c) 2004 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20040401,UT=20040325

(c) 2004 WIPO/Univentio

Set	Items	Description
S1	120	REPLICA?(1W) (UPDAT???? ? OR UP() (DATE? ? OR DATING?)) (1W)V- ECTOR? OR RUV OR RUVS
S2	179799	SERVER? ? OR HOST? ? OR MAINFRAME? ? OR MAIN()FRAME? ? OR - RAS OR MAILSERVER? OR WEBSERVER? OR FILESERVER? OR HTTPSERVER?
S3	17731	(MANY OR MULTI OR SEVERAL OR PLURALIT? OR MULTIPLE OR NUME- ROUS OR DIFFERENT OR ACROSS OR MULTITUD? OR PLURIF? OR SECOND OR BOTH) (1W)S2
S4	30470	(BETWEEN OR VARIOUS OR VARIETY OR GROUP? ? OR CLUSTER? OR - NUMBER OR PAIR??? ? OR TRIO OR SET? ? OR NETWORK? ? OR CHAIN? ?) (1W)S2
S5	8305	(SERIES OR ANOTHER OR TWO OR THREE OR COLLECTION? OR DUAL - OR RANGE) (1W)S2
S6	13800	(CONSUMER? ? OR USER? ? OR BUYER? ? OR PATRON? ? OR PURCHA- SER? OR CUSTOMER? OR SHOPPER? OR CLIENT? ? OR ESHOPPER? OR RE- QUEST?R? ? OR MEMBER? ?) (1W)S2
S7	2263	(SUPPLIER? OR SELLER? OR DEALER? OR VEND?R? ? OR BROKER? ? OR TRANDER? ? OR MERCHANT? ? OR AGENT? ? OR RESELLER? OR DIST- RIBUT?R? ? OR RETAILER? OR MANUFACTURER?) (1W)S2
S8	27	TRADER? ?(1W)S2
S9	142147	SYNC???? ? OR HOTSYNC? OR DATASYNC? OR SYNCHRONIS??????? ? - OR SYNCHRONIZ??????? ?
S10	96168	UPDAT???? ? OR UP() (DATE? ? OR DATING?)
S11	3015	S3:S8(25N)S9:S10
S12	0	S1(25N)S11
S13	1038	S3:S8(25N)S9
S14	2272	S3:S8(25N)S10
S15	127	S13(25N)S14
S16	49	S15(25N)S6
S17	1	S15(25N)S7
S18	414665	REPLICA? OR COPY??? ? OR COPIE? ? OR DUPLICAT? OR REPRODUC- ????? ? OR RECREAT???? ? OR RECONSTRUCT???? ? OR MIRROR? OR C- LON??? ? OR REGENERAT???? ?
S19	64718	S18(3N) (DATA OR INFORMATION OR OBJECT? ? OR MESSAGE? ? OR - FILE? ? OR CONTENT OR ECONTENT OR RECORD? ? OR REPORT? ?)
S20	9	S15(25N)S19
S21	5	S16(25N)S19
S22	164	S11(25N)S19
S23	4	S22(25N)S16
S24	794	S3:S8(15N)S9
S25	1609	S3:S8(15N)S10
S26	72	S24(25N)S25
S27	6	S26(25N)S19
S28	10	S17 OR S20:S21 OR S23 OR S27
S29	10	IDPAT (sorted in duplicate/non-duplicate order)
S30	9	IDPAT (primary/non-duplicate records only)

30/5,K/1 (Item 1 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01383553

**A recording process for a relationship between computer users**

**Aufzeichnungsverfahren fur Beziehungen zwischen Rechnerbenutzern**

**Procede d'enregistrement de relations entre utilisateurs d'ordinateurs**

PATENT ASSIGNEE:

Pas International SA, (3398000), 17 Square Edouard VII, 75009 Paris, (FR)  
, (Applicant designated States: all)

INVENTOR:

Dreux, Vincent, 10, rue Crevaux, 75116 Paris, (FR)

LEGAL REPRESENTATIVE:

Cabinet Hirsch (101611), 34, Rue de Bassano, 75008 Paris, (FR)

PATENT (CC, No, Kind, Date): EP 1174815 A1 020123 (Basic)

APPLICATION (CC, No, Date): EP 2001401881 010713;  
PRIORITY (CC, No, Date): US 617668 000717  
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR  
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI  
INTERNATIONAL PATENT CLASS: G06F-017/60

ABSTRACT EP 1174815 A1

The invention concerns the recording of a relationship between users of a network, such as the relationship between a client and a supplier, for invoicing the client and paying the supplier. There is provided a list of acts of each user, which each user may access through the network. According to the accesses of the users to the list, the list is updated. No user is allowed to alter acts previously recorded on the list. Thus, the list at any given time provides an overview of the history of the relationship between the users.

ABSTRACT WORD COUNT: 95

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 020123 A1 Published application with search report

Withdrawal: 030423 A1 Date application deemed withdrawn: 20020724

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
----------------	----------	--------	------------

CLAIMS A	(English)	200204	241
----------	-----------	--------	-----

SPEC A	(English)	200204	4617
--------	-----------	--------	------

Total word count - document A	4858
-------------------------------	------

Total word count - document B	0
-------------------------------	---

Total word count - documents A + B	4858
------------------------------------	------

...SPECIFICATION the creation, viewing or editing of documents. The product uses bases of documents distributed over **different servers**.

Information is automatically replicated **between servers**, so as to **synchronise** data throughout the whole system. Users may access **different servers** and may locally **update** the information present on a server for local use. Rights are defined in this product by controlling the access of **users** to **servers**, databases, documents and fields.

Accessing servers is authorised or not, based upon authentication of the

...

30/5,K/2 (Item 2 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2004 European Patent Office. All rts. reserv.

01269754

**Order fulfillment processing system**

**Verarbeitungssystem zum Ausführen von Bestellungen**

**Système de traitement pour l'exécution de commandes**

PATENT ASSIGNEE:

Hewlett-Packard Company, A Delaware Corporation, (3016020), 3000 Hanover

Street, Palo Alto, CA 94304, (US), (Applicant designated States: all)

INVENTOR:

Henning, Carole L., 1193 Auburn Ravine Road, Auburn, CA 95603, (US)

Peters, Melody, 2435 Shirland Tract Road, Auburn, CA 95603, (US)

Brandt, Gary, 1131 South Bluff Drive, Roseville, CA 95678, (US)

Nickey, Carolyn M., 2430 Ross Drive, Auburn, CA 95603, (US)

Price, Eric, 1319 Pilgrims Drive, Roseville, CA 95747, (US)

Sladek, Marjie, 8857 Bronson Drive, Granite Bay, CA 96746-6914, (US)

LEGAL REPRESENTATIVE:

Schoppe, Fritz, Dipl.-Ing. (55463), Schoppe, Zimmermann, Stockeler &

Zinkler Patentanwälte Postfach 246, 82043 Pullach bei München, (DE)

PATENT (CC, No, Kind, Date): EP 1094414 A2 010425 (Basic)

EP 1094414 A3 040310

APPLICATION (CC, No, Date): EP 2000118855 000831;

PRIORITY (CC, No, Date): US 425378 991022

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;

LU; MC; NL; PT; SE  
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI  
INTERNATIONAL PATENT CLASS: G06F-017/60

ABSTRACT EP 1094414 A2

A method and system for processing a customer generated order for a product, more particularly to a method for one or more client computers connected through a server to a plurality of supplier computers to fulfill a customer generated order. The method includes the client creating an order event with a preferred supplier, the server routing the order event to the preferred supplier, the server monitoring status of the order event from the preferred supplier, the preferred supplier processing the order event, and the server periodically synchronizing inventory between the client and all suppliers.

ABSTRACT WORD COUNT: 95

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 010425 A2 Published application without search report

Search Report: 040310 A3 Separate publication of the search report

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200117	1533
SPEC A	(English)	200117	3826
Total word count - document A			5359
Total word count - document B			0
Total word count - documents A + B			5359

...CLAIMS event and the preferred supplier further comprises the steps of:  
the server retrieving the most **updated** inventory from the preferred  
**supplier** ;  
the **server** sending an inventory- **synchronization** event with the  
**updated** inventory to the client;  
the client **updating** the current inventory for the preferred supplier;  
and,  
the server starting a timeout to initiate...

30/5,K/5 (Item 5 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2004 WIPO/Univentio. All rts. reserv.

00873787

INTEGRATED GIFT REGISTRY AND SHOPPING LIST SYSTEM

SYSTEME INTEGRE DE LISTES DE CADEAUX ET DE LISTES D'ACHATS

Patent Applicant/Assignee:

WHERE2NET INC, 2nd Floor, 4100 South El Camino Real, San Mateo, CA 94403,  
US, US (Residence), US (Nationality), (For all designated states  
except: US)

Patent Applicant/Inventor:

PANG Nicholas Y, 3918 Leona Street, San Mateo, CA 94403, US, US  
(Residence), US (Nationality), (Designated only for: US)  
TONDRE Stephen L, 33455 Caliban Drive, Fremont, CA 94555, US, US  
(Residence), US (Nationality), (Designated only for: US)  
YEUNG Alan S, 5006 Autumn Gold Common, Fremont, CA 94536, US, US  
(Residence), GB (Nationality), (Designated only for: US)

Legal Representative:

PIRIO Maurice J (et al) (agent), Perkins Coie LLP, P.O. Box 1247,  
Seattle, WA 98111-1247, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200207042 A2 20020124 (WO 0207042)

Application: WO 2001US22110 20010713 (PCT/WO US0122110)

Priority Application: US 2000218971 20000717

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP  
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD

SE SG SI SK SL TJ TM TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: G06F-017/60

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 5322

English Abstract

French Abstract

Legal Status (Type, Date, Text)

Publication 20020124 A2 With declaration under Article 17(2)(a); without abstract; title not checked by the International Searching Authority.

Fulltext Availability:

Detailed Description

Detailed Description

... kiosks will need to be updated daily if not more often. To provide real time data, especially to prevent duplicate purchases, synchronization software, such as that from fusionOne or PUMATECH, can be used to synchronize data residing on different mainframe computer systems or web server systems. In a similar fashion, software from

Marimba can also be used to synchronize and update the data or program

executables residing in different systems, including mainframes, web servers, local web...

30/5,K/6 (Item 6 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

(c) 2004 WIPO/Univentio. All rts. reserv.

00844268 \*\*Image available\*\*

**SYSTEM AND METHOD FOR SYNCHRONIZING DATA RECORDS BETWEEN MULTIPLE DATABASES**  
**SYSTEME ET PROCEDE DE SYNCHRONISATION D'ENREGISTREMENT DE DONNEES ENTRE**  
**PLUSIEURS BASES DE DONNEES**

Patent Applicant/Assignee:

RESEARCH IN MOTION LIMITED, 295 Phillip Street, Waterloo, Ontario N2L 3W8  
, CA, CA (Residence), CA (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

HIND Hugh, 41 Dawson Crescent, Georgetown, Ontario L7G 1H3, CA, CA  
(Residence), CA (Nationality), (Designated only for: US)

DUNK Craig, 28 Steffler Drive, Guelph, Ontario N1G 3L9, CA, CA  
(Residence), CA (Nationality), (Designated only for: US)

Legal Representative:

PERRY Stephen J (agent), Sim & McBurney, 330 University Avenue, 6th Floor, Toronto, Ontario M5G 1R7, CA,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200177858 A2-A3 20011018 (WO 0177858)

Application: WO 2001CA488 20010410 (PCT/WO CA0100488)

Priority Application: US 2000545964 20000410

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ  
DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MA MD ME MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG  
SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: G06F-017/30

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 23452

#### English Abstract

A system and method for synchronizing data records between multiple databases is provided. Each database includes data records that are modified to include at least one pair of synchronization parameters. In a two-database system including a first database and a second database, each data record is modified to include synchronization parameters for both the first and second databases. When an update is made to a data record at one of the databases, an update message is transmitted to the other database including both synchronization parameters from the database where the update is made, along with the updated data record. An efficient master-slave configuration between the databases then enables either database to resolve conflicts without further communications. The system and method scale to systems having more than two databases by modifying the data records in at least one of the databases to include a pair of synchronization parameters for each of the other databases to which it is being synchronized, and by providing a multi-level master-slave configuration. The system and method permits the ability to add and delete records and to securely communicate between all synchronized databases.

#### French Abstract

On decrit un systeme et un procede qui permettent de synchroniser des enregistrements de donnees entre plusieurs bases de donnees. Chaque base de donnees comprend des enregistrements de donnees qui sont modifies pour comprendre au moins une paire de parametres de synchronisation. Dans un systeme a deux bases de donnees comprenant des premiere et deuxieme bases de donnees, chaque enregistrement de donnees est modifie pour comporter des parametres de synchronisation destines aux premiere et deuxieme bases de donnees. Lorsqu'une mise a jour est effectuee pour un enregistrement de donnees dans une des bases de donnees, un message d'actualisation est envoye a l'autre base de donnees en meme temps que l'enregistrement de donnees mis a jour, le message d'actualisation comprenant les deux parametres de synchronisation de la base de donnees ou est effectuee la mise a jour. Une configuration maitre/esclave efficace realisee entre les bases de donnees permet ensuite a chaque base de donnees de resoudre les conflits sans utiliser d'autres communications. Le systeme et le procede s'adaptent a des systemes comportant plus de deux bases de donnees et pour cela, les enregistrements de donnees sont modifies dans au moins une des bases de donnees afin d'inclure une paire de parametres de synchronisation pour chacune des autres bases de donnees avec lesquelles elle est synchronisee, et on utilise une configuration maitre/esclave a plusieurs niveaux. Le systeme et le procede permettent d'ajouter et de supprimer des enregistrements et de communiquer en toute securite entre toutes les bases de donnees synchronisees.

#### Legal Status (Type, Date, Text)

Publication 20011018 A2 Without international search report and to be republished upon receipt of that report.

Examination 20020110 Request for preliminary examination prior to end of 19th month from priority date

Search Rpt 20021219 Late publication of international search report

Republication 20021219 A3 With international search report.

#### Fulltext Availability:

Detailed Description

Claims

## Detailed Description

... operate in accordance with another embodiment of the present invention in which data records are **synchronized** between a plurality of host systems and a portable communication device;  
FIG. 3 is a...

...a timing flow diagram showing a method of data record synchronization between a plurality of **host** systems and a portable communication device, wherein the data record is **updated** at the master host system;  
7

FIG. 7 is a timing flow diagram showing a method of data record synchronization between a **plurality** of **host** systems and a portable communication device, wherein the data record is **updated** at the portable communication device;

FIG. 8 is a timing flow diagram showing a method of data record synchronization between a **plurality** of **host** systems and a portable communication device, wherein the data record is **updated** at the slave host system;

FIG. 9 is a timing flow diagram showing a method of data record **synchronization** and conflict resolution between a **plurality** of **host** systems and a portable communication device, wherein the data record is simultaneously **updated**

by the master host system and the portable communication device;

FIG. 10 is a timing flow diagram showing a method of **replicating** a new **data record** between a host system and a portable communication device according to an embedded add data...

## Claim

... message.

26 The method of claim 25, further comprising the steps of incrementing the second **synchronization** parameter associated with the updated data record at the portable data communication device for the...

...update message from the portable data communication device to the second host system, the second **update** message including the incremented second synchronization parameter for the **second host** system, the first synchronization parameter for the **second host** system, and the **updated** data record from the portable data communication device; receiving the second **update** message at the **second host** system; and **updating** the data record at the **second host** system using the information from the second **update** message.

27 A method of **replicating data records** created in a first database in a second database, comprising the steps of:  
creating a...

30/5,K/8 (Item 8 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.

00545433 \*\*Image available\*\*  
SYSTEMS AND METHODS FOR MONITORING DISTRIBUTED APPLICATIONS USING  
DIAGNOSTIC INFORMATION  
SYSTEMES ET PROCEDES DE SURVEILLANCE D'APPLICATIONS REPARTIES, A L'AIDE  
D'INFORMATIONS DE DIAGNOSTIC

Patent Applicant/Assignee:

FIRSTSENSE SOFTWARE INC,

Inventor(s):

WILSON James,  
AGARWAL Neeraj,  
FERNANDEZ Gary,

DOCTOR Murtaza,  
KANE Ken,  
BRINER Albert,  
MUDDANA Sehkar,  
DEGROOT Pieter,  
LYON-SMITH John,  
MENDEL Scott,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200008806 A1 20000217 (WO 0008806)  
Application: WO 99US17531 19990803 (PCT/WO US9917531)  
Priority Application: US 9895142 19980803; US 99137121 19990602

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE  
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT  
LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT  
UA UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU  
TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG  
CI CM GA GN GW ML MR NE SN TD TG

Main International Patent Class: H04L-012/26

International Patent Class: H04L-029/06

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 13738

#### English Abstract

Systems and methods for automated monitoring and management of distributed applications, client/server databases, networks and systems across heterogeneous environments. Distributed, automated intelligent monitoring agents use embedded sensing technology which is knowledgeable of application protocols, to monitor continuously the network environment in real time. To this end, the monitoring agent can be located on each client and server in the network. The monitoring agent can couple to the communications stack for monitoring the data that is being passed between the client and the network, of a server in the network. The data can be collected and employed for trouble shooting trend analysis, resource planning, security auditing, and accounting as well as other applications. Also included is a controller for remotely coordinating the data gathering process from the various clients and servers. Data gathering can be performed in accordance with trigger events or on a periodic basis. Data may also be associated with a transaction and gathered in accordance with business transaction rules.

#### French Abstract

L'invention concerne des systemes et procedes de surveillance et gestion automatiques d'applications reparties, de bases de donnees clients/serveurs, de reseaux et systemes situes dans des environnements heterogenes. Des agents intelligents, repartis, de surveillance automatique, mettent en oeuvre une technologie de detection encastree, experte quant aux protocoles d'application, afin de surveiller en continu et en temps reel l'environnement du reseau. A cette fin, l'agent de surveillance peut etre place au niveau de chaque client et de chaque serveur du reseau et il peut se coupler a la pile de telecommunications d'un serveur du reseau, afin de surveiller les donnees echangees entre le client et le reseau. Les donnees peuvent etre recueillies et employees aux fins d'analyse des tendances de pannes, de planification des ressources, d'analyse de la chaine de securite, et de comptabilite, de meme que dans d'autres applications. L'invention concerne egalement un module de commande destine a coordonner a distance le processus de collecte de donnees a partir de divers clients et serveurs, cette collecte pouvant s'effectuer selon des evenements declenchants ou sur une base periodique. De meme, des donnees peuvent etre associees a une transaction et collectees en fonction de regles de transaction commerciales.

Fulltext Availability:

Detailed Description



Detailed Description  
... figures.

In one embodiment, it should be noted that when there is a modification or **update** to the data file stored in the data repository, the controller synchronizes the various copies of the data as used by the clients and **servers**. In other words, if there is an **update** or modification to the data file, for example, adding new trigger events as with an off-line editing process, the 10 various **copies** of the **data** as used by the **clients** and **servers** are **synchronized** with the **copy** in the **data** repository. The controller is responsible for detecting this **update** and ensuring that each **client** or **server** is accessing a common version of the data file.

For each of these requests being...

File 9:Business & Industry(R) Jul/1994-2004/Apr 01  
(c) 2004 The Gale Group  
File 16:Gale Group PROMT(R) 1990-2004/Apr 05  
(c) 2004 The Gale Group  
File 47:Gale Group Magazine DB(TM) 1959-2004/Apr 05  
(c) 2004 The Gale group  
File 148:Gale Group Trade & Industry DB 1976-2004/Apr 05  
(c)2004 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group  
File 275:Gale Group Computer DB(TM) 1983-2004/Apr 05  
(c) 2004 The Gale Group  
File 570:Gale Group MARS(R) 1984-2004/Apr 05  
(c) 2004 The Gale Group  
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Apr 05  
(c) 2004 The Gale Group  
File 636:Gale Group Newsletter DB(TM) 1987-2004/Apr 05  
(c) 2004 The Gale Group  
File 649:Gale Group Newswire ASAP(TM) 2004/Apr 02  
(c) 2004 The Gale Group

Set	Items	Description
S1	139	REPLICA?(1W) (UPDAT???? ? OR UP() (DATE? ? OR DATING?)) (1W)V- ECTOR? OR RUV OR RUVS
S2	2735809	SERVER? ? OR HOST? ? OR MAINFRAME? ? OR MAIN()FRAME? ? OR - RAS OR MAILSERVER? OR WEBSEVER? OR FILESERVER? OR HTTPSERVER?
S3	86346	(MANY OR MULTI OR SEVERAL OR PLURALIT? OR MULTIPLE OR NUME- ROUS OR DIFFERENT OR ACROSS OR MULTITUD? OR PLURIF? OR SECOND OR BOTH) (1W)S2
S4	141375	(BETWEEN OR VARIOUS OR VARIETY OR GROUP? ? OR CLUSTER? OR - NUMBER OR PAIR??? ? OR TRIO OR SET? ? OR NETWORK? ? OR CHAIN? ?) (1W)S2
S5	50818	(SERIES OR ANOTHER OR TWO OR THREE OR COLLECTION? OR DUAL - OR RANGE) (1W)S2
S6	345291	(CONSUMER? ? OR USER? ? OR BUYER? ? OR PATRON? ? OR PURCHA- SER? OR CUSTOMER? OR SHOPPER? OR CLIENT? ? OR ESHOPPER? OR RE- QUEST?R? ? OR MEMBER? ?) (1W)S2
S7	14097	(SUPPLIER? OR SELLER? OR DEALER? OR VEND?R? ? OR BROKER? ? OR TRANDER? ? OR MERCHANT? ? OR AGENT? ? OR RESELLER? OR DIST- RIBUT?R? ? OR RETAILER? OR MANUFACTURER?) (1W)S2
S8	46	TRADER? ?(1W)S2
S9	246903	SYNC???? ? OR HOTSYNC? OR DATASYNC? OR SYNCHRONIS??????? ? - OR SYNCHRONIZ??????? ?
S10	1799369	UPDAT???? ? OR UP() (DATE? ? OR DATING?)
S11	20113	S3:S8(S)S9:S10
S12	0	S1(S)S11
S13	7490	S3:S8(S)S9
S14	13540	S3:S8(S)S10
S15	733	S13(S)S14
S16	274	S15(S)S6
S17	8	S15(S)S7
S18	5710621	REPLICA? OR COPY? OR COPIE? ? OR DUPLICAT? OR REPRODUC? OR RECREAT? OR RECONSTRUCT? OR MIRROR? OR CLON??? ? OR REGENERAT?
S19	427110	S18(2N) (DATA OR INFORMATION OR OBJECT? ? OR MESSAGE? OR FI- LE? ? OR CONTENT OR ECONTENT OR RECORD? ? OR REPORT? ?)
S20	130	S15(S)S19
S21	55	S16(S)S19
S22	1060	S11(S)S19
S23	55	S22(S)S16
S24	4600	S3:S8(15N)S9
S25	6518	S3:S8(15N)S10

S26 311 S24(S)S25  
S27 79 S26(S)S19  
S28 113 S17 OR S21 OR S23 OR S27  
S29 0 S28/2002:2004  
S30 59 RD S28 (unique items)

30/3,K/2 (Item 2 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2004 The Gale Group. All rts. reserv.

1646691 Supplier Number: 01646691 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**D-Day: Microsoft Plans Its Normandy Invasion**  
**(Microsoft Corp rolling out new components for its Normandy Internet server product line)**  
Computer Reseller News, n 706, p 111  
October 21, 1996  
DOCUMENT TYPE: Journal ISSN: 0893-8377 (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 657

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:  
...s ActiveX Server Scripting environment, will be the mechanism for customizing content.

Microsoft's forthcoming **Content Replication** Server will enable customers to keep **multiple servers** and sites in **synch** by providing in-place HTML **updates** and single-button publishing on staging servers.

The Information Retrieval Server will provide full-text...

30/3,K/3 (Item 3 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2004 The Gale Group. All rts. reserv.

1236530 Supplier Number: 01236530 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Elan Ships Gateway to GoldMine**  
**(Elan Software unveils GoldSync Remote Synchronization Gateway software that lets organizations link mobile and remote users to its GoldMine groupware)**  
CommunicationsWeek, n 565, p 35  
July 10, 1995  
DOCUMENT TYPE: Journal ISSN: 0748-8121 (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 355

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:  
...tie mobile and remote users to its GoldMine groupware offering.

The company's Goldsync Remote **Synchronization** Gateway provides **data replication** between **multiple** sites, **hosts** and users across an enterprise network at predesignated time intervals. That lets managers make sure **updated** information is available to users in the field, according to the Pacific Palisades, Calif., company...

30/3,K/4 (Item 1 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2004 The Gale Group. All rts. reserv.

09166592 Supplier Number: 79954146 (USE FORMAT 7 FOR FULLTEXT)  
**Mykenae Admits to the CRN Test Center Review and Announces General  
Availability of the Perseus DNA technologies at COMDEX Fall 2001.**  
Business Wire, p0345  
Nov 12, 2001  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 499

... best able to handle a user's request. It enables organizations to optimize their enterprise **network servers** availability, **synchronization**, and performance and cost-effectively manage their web infrastructure. Perseus DNA also enables effective **data replication** and synchronization in a variety of network environments. The built-in **content replication** capability enables network managers to increase access to content by capturing and storing content at points **between** production **servers** and end-users. This technology ensures the newly published or **updated** files and applications are replicated across all target servers.

At COMDEX Fall 2001, Mykenae also...

30/3,K/7 (Item 4 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2004 The Gale Group. All rts. reserv.

07482299 Supplier Number: 62653319 (USE FORMAT 7 FOR FULLTEXT)  
**The Essential Guide to Installing Windows 2000 Server. (The Essential Guide to Installing Windows 2000 Server -- Windows 2000 Server is a sweet server indeed, once you get it installed. Our detailed guide will help you get it up and running with a minimum of fuss.) (Product Information)**  
Boyce, Jim  
WinMag.com, pNA  
May 24, 2000  
Language: English Record Type: Fulltext Abstract  
Document Type: Magazine/Journal; Trade  
Word Count: 6079

(USE FORMAT 7 FOR FULLTEXT)  
TEXT:  
...more on upgrading existing NT 4.0 servers, read Microsoft's Preparing Your x86-Based **Member Servers** for Upgrade to Windows 2000. Ready to get going? Your next stop: The Best Way...use Windows NT 4.0's NTFS. Windows 2000 comes with NTFS 5.0, an **updated** version. Version 5.0 changes disk structure to incorporate new features such as junction points and disk quotas. Win2000's setup program automatically **updates** any preexisting NTFS volumes to version 5.0, without giving users the ability to revert...  
...controller (DC) in a Windows 2000 domain is a peer, and AD serves as the **synchronization** mechanism for domain data (accounts, groups, and so on). Windows 2000 DCs can coexist with...

...must upgrade the Primary Domain Controller (PDC) first, but you can leave the BDCs and **member servers** online until you get the opportunity to upgrade them. In other words, you don't...

...full advantage of Active Directory and security changes in Windows 2000. After that, concentrate on **member servers**. For more information on

domain migration, see this Microsoft Developer Network document: Migrating Domain Controllers to Windows 2000 and this Microsoft support document: Promoting and Demoting Domain Controller to **Member Server** in Windows 2000. There's one "gotcha" to look out for when upgrading the PDC...

...Replication and hosts the export directory, you'll need to restructure replication and designate a **different server** as the export directory host. After you've upgraded all the servers participating in replication, you can switch to using the Active Directory for replication and **synchronization**. (In a multiple domain environment, you will also need to consider domain trust relationships.) Running...

...for secondary zones and zone transfers, as AD replication takes care of broadcasting DNS changes **between DNS servers** in the domain. To take advantage of these AD-related features for DNS you must...

...be available. Dynamic DNS (DDNS) is another consideration. A Windows 2000 DNS server supports automatic **updates** of resource records in the DNS namespace. Win2000 clients can request **updates** of their host records, and Windows 2000 DHCP servers can request **updates** on behalf of clients (including non-Windows 2000 clients) of **both the host** and pointer record. You enable dynamic **update** of DNS zones on a zone-by-zone basis. Zones stored in the AD offer...

...added benefit of increased security, which lets you use ACLs to determine who can request **updates**. This is called a secure **update**. Zones stored outside the AD support only unsecured **updates**. Keep these factors in mind when determining how and when to **update** your DNS servers to Win2000. In the same vein as DNS, Dynamic Host Configuration Protocol... DNS Server should come in handy for both new and legacy environments, and DHCP Dynamic **Updates** with DNS details the mechanism by which **updates** take place. The Pre-install Checklist Before you jump headfirst into a Windows 2000 Server installation -- and particularly if you'll be upgrading **several servers** -- your first step should be to make sure everything you'll need throughout the entire...

...related data is a critical issue. Before beginning an upgrade on a PDC, perform a **synchronization** of the entire domain to ensure that changes are incorporated at all BDCs. Run the RDISK utility with the /S switch to **update** the Security Account Manager (SAM) along with the other repair data (in addition to backing...to support your security needs. After the groups are determined, you can start planning individual **user** accounts. **Servers** connected to the Internet have special security considerations. In most cases the best design is to place a server between the Internet and the rest of your **network**. The **server** runs firewall or proxy software that helps insulate the LAN from the outside world. You...

...Toolkit from Funduc Software. Boot your current installation of NT and execute RDISK /S to **update** the repair data and the Emergency Repair Disk (ERD). This is merely a precautionary measure...all of the files in the folder to

WIN2K

System32

Config. You'll have to **copy** the **files** one at a time or create a batch file in advance for this purpose. (This...domain in an existing forest). If you want to demote a DC to a member **server** or standalone server, click Start > Run, and type DCPROMO in the Run dialog box. Configure Accounts...

(c) 2004 The Gale Group. All rts. reserv.

07263001 Supplier Number: 61699434 (USE FORMAT 7 FOR FULLTEXT)  
**Host Integration Server 2000 Bridges Today's Technology to Legacy Systems.**  
PR Newswire, pNA  
April 26, 2000  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 595

... furthered its commitment to providing the most comprehensive solution for embracing the Internet, intranets and **client - server** technologies with the release of the beta 2 version of Host Integration Server 2000. This release, which includes **updates** to the product that was released in February, now allows bidirectional replication between Oracle and...

...databases connected by LANs, WANs or the Internet. This replication functionality allows customers to make **duplicate copies** of **data**, move those **copies** to different locations, and **synchronize** the data automatically so that all copies have the same data values. Host Integration Server...

30/3,K/9 (Item 6 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2004 The Gale Group. All rts. reserv.

06140380 Supplier Number: 53904211 (USE FORMAT 7 FOR FULLTEXT)  
**Connect-Care Becomes Mobile Application With Synchrologic's Synchronization Server.**  
Business Wire, p0022  
Feb 19, 1999  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 628

... functions.  
Synchrologic Mobile Synchronization Server  
Available to software vendors and corporate application developers, Synchrologic's **SyncKit** mobile **synchronization** server provides **data replication** capabilities between a heterogeneous mix of server and client-side databases. Reducing the time and effort required to build **client / server** applications that are intermittently connected to a central database server, **SyncKit** transmits field-level **updates** only, reducing connection times and simplifying back-end data management. In addition to supporting Microsoft Access, Sybase Adaptive Server Anywhere, and Oracle Lite, it **synchronizes** bidirectionally with enterprise databases like Oracle, Microsoft SQL Server, IBM DB2 and Informix. **SyncKit** is scalable to thousands of remote installations and comes complete with an administrative tool set...

30/3,K/13 (Item 10 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2004 The Gale Group. All rts. reserv.

05266196 Supplier Number: 48024158 (USE FORMAT 7 FOR FULLTEXT)  
**RFP: Corporate Intranets -- 4 Vendors Provide Their Solutions**  
Walsh, Brian

Network Computing, p56

Oct 1, 1997

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 6101

... Netscape recommends taking a DNS round-robin approach to load-balance Web-page hits across **two** file **servers** that in turn are updated via rdist (a Unix background process that maintains **copies** of **files** on **multiple** **hosts**) to maintain **synchronization** between the two file systems; Netscape would create a DNS round-robin for each server...

30/3,K/15 (Item 12 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2004 The Gale Group. All rts. reserv.

04106879 Supplier Number: 45989013 (USE FORMAT 7 FOR FULLTEXT)

**MICROSOFT ANNOUNCES RELEASE CANDIDATE FOR MICROSOFT EXCHANGE SERVER**

PR Newswire, p1205SETU012

Dec 5, 1995

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 819

... For example, a sales executive can use a customer-tracking application on a business trip, **update** it based on customer calls during the trip, then use local replication to **synchronize both** the **server** and local versions of the application. Local replication is better than merely **copying** a **file** onto a local PC because the off-line folder that contains the application understands its...

30/3,K/16 (Item 13 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2004 The Gale Group. All rts. reserv.

03985862 Supplier Number: 45786688 (USE FORMAT 7 FOR FULLTEXT)

**NOVELL CONTINUES ITS COMMITMENT TO ADVANCE ITS INDUSTRY-STANDARD NETWORK  
DIRECTORY SERVICES**

PR Newswire, p913SJ008

Sept 13, 1995

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 813

... Services by updating information more quickly and accurately across enterprise environments. Enhanced data tracking and **synchronization** processes allow an administrator to monitor **replication information across servers**. These **updated** processes record network events that affect directory **synchronization** and integrity, such as the temporary failure of a wide-area communication link.

The NDS...

30/3,K/17 (Item 14 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2004 The Gale Group. All rts. reserv.

03692609 Supplier Number: 45225035

**Oracle extends replication capabilities**

InfoWorld, p3

Dec 26, 1994

Language: English Record Type: Abstract

Document Type: Magazine/Journal; Trade

**ABSTRACT:**

...product will ship separately from Workgroup Server. The new replication capabilities include a feature called **Update Anywhere Replication**, which makes it possible for users at **multiple Oracle server** sites to **update** copies of the same **data**, keeping all **copies** in **sync** automatically. Any changes are reconciled and replicated at all sites where copies are stored.

...

**30/3,K/18 (Item 15 from file: 16)**

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2004 The Gale Group. All rts. reserv.

03385931 Supplier Number: 44701521 (USE FORMAT 7 FOR FULLTEXT)

**IBM AS/400 ANNOUNCEMENTS**

Computergram International, n2421, pN/A

May 24, 1994

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 1027

... less alien

The IBM DataPropagator Relational Capture and Apply/400 Version 3. Release 1 automatically **copies data** within and between DB2/400, DB2 and DB2/2 databases. DataPropagator Relational/400 enables you to subset **copied data**, maintain historical change **information**, and control **copy** impact on system resources. Copying can involve transferring the entire contents of a user table...

...the changes that have occurred since the last copy. DataPropagator Relational/400 can also complement **client - server** environments, says IBM. Clients that **update** the master database can have their **updates** automatically propagated to other client databases. DataPropagator Relational/2 provides a graphical user interface for...

...with all of the DataPropagator Relational supported databases, including DB2/400. Users can automatically maintain **synchronisation** with the original **data** by specifying **copy** intervals in minutes, hours, days, or weeks. If DataPropagator Relational/400 is used with other...

**30/3,K/19 (Item 16 from file: 16)**

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2004 The Gale Group. All rts. reserv.

01216869 Supplier Number: 41402327 (USE FORMAT 7 FOR FULLTEXT)

**3Com: Directory services: Firm announces global naming product for LAN Manager**

Computer Reseller News, p49

June 25, 1990

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 567

... There is no real limit to N-part names," Eng said.



The directory service automatically **synchronizes** directory **updates** across the network. **Replication** of **data** on **multiple** **servers** across the global network gives users virtually uninterrupted access to directory information, even if there...

30/3,K/20 (Item 17 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2004 The Gale Group. All rts. reserv.

01212222 Supplier Number: 41395848 (USE FORMAT 7 FOR FULLTEXT)  
**3COM SIMPLIFIES ACCESS TO GLOBAL MULTIVENDOR NETWORKS**  
Newsbytes, pN/A  
June 19, 1990  
Language: English Record Type: Fulltext  
Document Type: Newswire; General Trade  
Word Count: 344

... a single repository for such data as names and addresses. The directory service automatically **synchronizes** directory **updates** across the network, giving users access to consistent **information**. **Replication** of **data** on **multiple** **servers** across the global network gives users uninterrupted access to directory information, even if there is...  
? t30/3,k/24-25,31,40

30/3,K/24 (Item 2 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2004 The Gale Group. All rts. reserv.

13446224 SUPPLIER NUMBER: 74823746 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Inktomi Makes Sense of Complex Content.**  
NOTESS, GREG R.  
EContent, 24, 4, 60  
June, 2001  
ISSN: 1525-2531 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 1066 LINE COUNT: 00090

... separately, but are typically packaged together in the suite. The Content Distributor can replicate content **updates** to a whole **collection** of **servers** while **synchronizing** the **updates** to make sure that the new content is available on all the servers at the...

30/3,K/25 (Item 3 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2004 The Gale Group. All rts. reserv.

09906453 SUPPLIER NUMBER: 20052346 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Windows NT Server to Server Data Replication Enhanced in PowerSync 4.0.**  
Business Wire, p11171329  
Nov 17, 1997  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 376 LINE COUNT: 00037

... managed by system administrators utilizing one-to-many and many-to-many data replication and **synchronization** **between** **servers** on LANs and WANs.

PowerSync 4.0 provides content **updates**, data protection and user load balancing for networked Windows NT and NetWare Servers. "With the help of PowerSync 4.0, current **copies** of critical **data** are always available

to users throughout the enterprise," said Frank Reinhart, president of LinkPro.

List...

30/3,K/31 (Item 9 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2004 The Gale Group. All rts. reserv.

08012046 SUPPLIER NUMBER: 17295972 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Elan ships Gateway to GoldMine: GoldSync software provides data replication for remote users across vendor's enterprise network. (Elan Software's GoldSync Remote Synchronization Gateway file synchronization software, GoldMine groupware) (Product Announcement)**

Baron, Talila

CommunicationsWeek, n565, p35(1)

July 10, 1995

DOCUMENT TYPE: Product Announcement ISSN: 0746-8121 LANGUAGE:  
English RECORD TYPE: Fulltext; Abstract

WORD COUNT: 365 LINE COUNT: 00033

The company's GoldSync Remote Synchronization Gateway provides data replication between multiple sites, hosts and users across an enterprise network at predesignated time intervals. That lets managers make sure **updated** information is available to users in the field, according to the Pacific Palisades, Calif., company...

30/3,K/40 (Item 18 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2004 The Gale Group. All rts. reserv.

07612584 SUPPLIER NUMBER: 15990127 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Oracle extends replication capabilities; will introduce Workgroup Enterprise Server. (database software with replication capabilities)**

Ricciuti, Mike

InfoWorld, v16, n52-1, p3(1)

Dec 26, 1994

ISSN: 0199-6649 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 403 LINE COUNT: 00032

... for use across Oracle's lineup.

Among the new replication capabilities is a feature called **Update Anywhere Replication**, first promised more than a year ago. Update Anywhere lets users at **multiple Oracle server sites update** copies of the same **data**, while all **copies** are automatically kept in **sync**. Changes are reconciled and then propagated via replication to all sites where **copies** of the **data** are stored.

Currently, Oracle databases support replication only through snapshots, or static copies of data...

? t30/3,k/41-42,44,46,49,51

30/3,K/41 (Item 19 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2004 The Gale Group. All rts. reserv.

05842025 SUPPLIER NUMBER: 12016372 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**NetWare NLMs to translate mail APIs: users to mix, match numerous protocols. (NetWare Loadable Modules; applications programming interfaces) (Product Announcement)**

Fickel, Louise  
MacWEEK, v6, n13, p14(1)  
March 30, 1992  
DOCUMENT TYPE: Product Announcement ISSN: 0892-8118 LANGUAGE:  
ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT  
WORD COUNT: 417 LINE COUNT: 00034

... format and address-header format for each recipient's mail server.  
The server also will **synchronize** directory information by distributing and **replicating** a **message** database **across multiple servers**, eliminating the need for manual user-list **updates**. But directory **synchronization** will not be available until Novell ships an upgrade to MHS, which is due by...

30/3,K/42 (Item 20 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2004 The Gale Group. All rts. reserv.

04370393 SUPPLIER NUMBER: 08656024  
3Com: **directory services: firm announces global naming product for LAN Manager.**  
Mehta, Suketu  
Computer Reseller News, n374, p49(2)  
June 25, 1990  
ISSN: 0893-8377 LANGUAGE: ENGLISH RECORD TYPE: ABSTRACT

...ABSTRACT: Open Directory, shipping in the third quarter of 1990, will facilitate naming services by automatically **synchronizing updates** to a directory throughout a network. This **data replication** will be accomplished on **multiple servers** across a global network. It will provide users with nearly unlimited access to information from...

30/3,K/44 (Item 2 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
(c) 2004 The Gale Group. All rts. reserv.

01995451 SUPPLIER NUMBER: 18557400 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Replication on the run. (database vendors addressing bidirectional replication for mobile computing market) (includes related article on case study of Becton Dickinson) (Technology Information)**  
Francett, Barbara  
Software Magazine, v16, n8, p63(4)  
August, 1996  
ISSN: 0897-8085 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 2909 LINE COUNT: 00237

... processors, 12Mb of RAM and 14.4 modems. A new SQL Anywhere feature, SQL Remote, **updates** and **synchronizes** the data on the **clients** with **host** data on sales, marketing and customer service that resides on several AS/400 systems at headquarters. BD Mobile **replicates** new **data** from the field to the host via Lotus cc:Mobile E-mail Each day, BD...

30/3,K/46 (Item 4 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
(c) 2004 The Gale Group. All rts. reserv.

01885042 SUPPLIER NUMBER: 17573637 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Raising the bar. (Microsoft SQL Server 6.0 DBMS) (Software Review) (Evaluation)

Menninger, Dave

Data Based Advisor, v13, n8, p40(3)

Sep, 1995

DOCUMENT TYPE: Evaluation ISSN: 0740-5200

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 2149 LINE COUNT: 00176

... a two-phase commit protocol that allows an application developer to construct transactions that simultaneously **update** multiple databases on **multiple servers**. For continuous **synchronization** of data **across multiple servers** on a near-real-time basis, SQL Server 6.0 provides log-based, guaranteed **replication** of **data** using a publisher/subscriber model. In addition, snapshots of data and object transfers can also...

...a particular point in time. (For a general discussion of replication capabilities and models, see **Client - Server Developer**, DATA BASED ADVISOR, March 1995.) Microsoft's replication model appears to be very rich ...

30/3,K/49 (Item 7 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2004 The Gale Group. All rts. reserv.

01678506 SUPPLIER NUMBER: 15102637 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Get your data together. (replication helps centralize data

control) (includes related article on how Lotus Notes does replication)

(Client/Server Advisor: Data Replication) (Column)

Myers, Marc

Data Based Advisor, v12, n4, p104(6)

April, 1994

DOCUMENT TYPE: Column ISSN: 0740-5200

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 3495 LINE COUNT: 00273

...ABSTRACT: updated at the same time and causes fewer problems.

Replication is a cloning process that **copies data** to all participating servers. When a subscriber site is unavailable the data is buffered and the subscriber is re- **synchronized** as soon as it comes back on line.

30/3,K/51 (Item 9 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2004 The Gale Group. All rts. reserv.

01376150 SUPPLIER NUMBER: 08778032 (USE FORMAT 7 OR 9 FOR FULL TEXT)

3Com simplifies access to global multivendor networks. ( 3+Open Directory and 3+Open Menus) (product announcement)

Wingrove, Norman

Newsbytes, NEW06190034

June 19, 1990

DOCUMENT TYPE: product announcement

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 366 LINE COUNT: 00031

... as a single repository for such data as names and addresses. The directory service automatically **synchronizes** directory **updates** across the network, giving users access to consistent **information**. **Replication**

of data on multiple servers across the global network gives users uninterrupted access to directory information, even if there is...  
? t30/3,k/52,57-59

30/3,K/52 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2004 The Gale Group. All rts. reserv.

04158211 Supplier Number: 54499216 (USE FORMAT 7 FOR FULLTEXT)  
**INKTOMI: Inktomi announces Traffic Server 3.0.**  
M2 Presswire, pNA  
April 27, 1999  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 1337

... content popularity, and traffic fluctuations.  
WebSpective's content distribution software works with Traffic Server to **synchronise** content **updates** across Web **servers**, mirror servers, and distributed caches. This enables explicit controls for content **synchronisation** and centralised management capability. The combined solution allows Web hosting providers to deliver value-added services to their customers such as distributed caching, **replication**, and **mirroring**.

**Content** transformation and support for Internet devices Spyglass Prism for Traffic Server is a content transformation...

30/3,K/57 (Item 6 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2004 The Gale Group. All rts. reserv.

02869683 Supplier Number: 45825903 (USE FORMAT 7 FOR FULLTEXT)  
**NOVELL CONTINUES TO ADVANCE ITS NETWARE DIRECTORY SERVICES**  
PCNetter, v10, n10, pN/A  
Oct 1, 1995  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Trade  
Word Count: 301

... Services by updating information more quickly and accurately across enterprise environments. Enhanced data-tracking and **synchronization** processes allow an administrator to monitor **replication** **information** across servers. These **updated** processes record network events that affect directory **synchronization** and integrity, such as the temporary failure of a wide-area communication link.  
The NDS...

30/3,K/58 (Item 7 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2004 The Gale Group. All rts. reserv.

02861582 Supplier Number: 45804871 (USE FORMAT 7 FOR FULLTEXT)  
**NOVELL: Novell continues commitment to advance industry-standard NetWare directory services**  
M2 Presswire, pN/A  
Sept 22, 1995  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade

Word Count: 642

... Services by updating information more quickly and accurately across enterprise environments. Enhanced data tracking and **synchronisation** processes allow an administrator to monitor **replication** information across servers .

These **updated** processes record network events that affect directory **synchronisation** and integrity, such as the temporary failure of a wide-area communication link.

The NDS...

30/3,K/59 (Item 8 from file: 636)  
DIALOG(R) File 636:Gale Group Newsletter DB(TM)  
(c) 2004 The Gale Group. All rts. reserv.

02663922 Supplier Number: 45399530 (USE FORMAT 7 FOR FULLTEXT)  
**MERGER: PLATINUM TECHNOLOGY & TRINZIC CORPORATION TO MERGE; COMBINATION  
WILL DELIVER BROADEST DATA WAREHOUSING PRODUCT LINE IN INDUSTRY**  
EDGE: Work-Group Computing Report, v6, n251, pN/A  
March 13, 1995  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Trade  
Word Count: 784

... tool that enables end-users to access, analyze, and represent information from more than 25 **different** database **servers** , mainframe systems and Lotus Notes; InfoPump, a server-based **data replication** tool that allows users to access, move, **synchronize** , transform, and integrate data to and from multiple database sources in a heterogeneous **client / server** environment; InfoHub, which allows PC-based users to directly access and **update** data residing on a mainframe system; Aion Development System, a business rules application development tool; and ObjectPro, an object -oriented development tool designed for building complex **client / server** applications in a fully visual environment.

PLATINUM'S STRATEGIC DIRECTION The addition of Trinzic's...

?

File 256:SoftBase:Reviews,Companies&Prods. 82-2004/Mar  
(c)2004 Info.Sources Inc  
File 2:INSPEC 1969-2004/Mar W3  
(c) 2004 Institution of Electrical Engineers  
File 6:NTIS 1964-2004/Mar W4  
(c) 2004 NTIS, Intl Cpyrght All Rights Res  
File 8:Ei Compendex(R) 1970-2004/Mar W3  
(c) 2004 Elsevier Eng. Info. Inc.  
File 34:SciSearch(R) Cited Ref Sci 1990-2004/Mar W3  
(c) 2004 Inst for Sci Info  
File 35:Dissertation Abs Online 1861-2004/Feb  
(c) 2004 ProQuest Info&Learning  
File 65:Inside Conferences 1993-2004/Mar W4  
(c) 2004 BLDSC all rts. reserv.  
File 94:JICST-EPlus 1985-2004/Mar W2  
(c)2004 Japan Science and Tech Corp(JST)  
File 95:TEME-Technology & Management 1989-2004/Mar W2  
(c) 2004 FIZ TECHNIK  
File 99:Wilson Appl. Sci & Tech Abs 1983-2004/Feb  
(c) 2004 The HW Wilson Co.  
File 111:TGG Natl.Newspaper Index(SM) 1979-2004/Mar 31  
(c) 2004 The Gale Group  
File 144:Pascal 1973-2004/Mar W3  
(c) 2004 INIST/CNRS  
File 202:Info. Sci. & Tech. Abs. 1966-2004/Feb 27  
(c) 2004 EBSCO Publishing  
File 233:Internet & Personal Comp. Abs. 1981-2003/Sep  
(c) 2003 EBSCO Pub.  
File 266:FEDRIP 2004/Feb  
Comp & dist by NTIS, Intl Copyright All Rights Res  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 1998 Inst for Sci Info  
File 483:Newspaper Abs Daily 1986-2004/Mar 30  
(c) 2004 ProQuest Info&Learning  
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13  
(c) 2002 The Gale Group  
File 603:Newspaper Abstracts 1984-1988  
(c)2001 ProQuest Info&Learning

Set	Items	Description
S1	159	REPLICA?(1W) (UPDAT???? ? OR UP() (DATE? ? OR DATING?)) (1W)V- ECTOR? OR RUV OR RUVS
S2	873185	SERVER? ? OR HOST? ? OR MAINFRAME? ? OR MAIN()FRAME? ? OR - RAS OR MAILSERVER? OR WEBSEVER? OR FILESERVER? OR HTTPSERVER?
S3	18461	(MANY OR MULTI OR SEVERAL OR PLURALIT? OR MULTIPLE OR NUME- ROUS OR DIFFERENT OR ACROSS OR MULTITUD? OR PLURIF? OR SECOND OR BOTH) (1W)S2
S4	32239	(BETWEEN OR VARIOUS OR VARIETY OR GROUP? ? OR CLUSTER? OR - NUMBER OR PAIR??? ? OR TRIO OR SET? ? OR NETWORK? ? OR CHAIN? ?) (1W)S2
S5	9143	(SERIES OR ANOTHER OR TWO OR THREE OR COLLECTION? OR DUAL - OR RANGE) (1W)S2
S6	61737	(CONSUMER? ? OR USER? ? OR BUYER? ? OR PATRON? ? OR PURCHA- SER? OR CUSTOMER? OR SHOPPER? OR CLIENT? ? OR ESHOPPER? OR RE- QUEST?R? ? OR MEMBER? ?) (1W)S2
S7	1740	(SUPPLIER? OR SELLER? OR DEALER? OR VEND?R? ? OR BROKER? ? OR TRANDER? ? OR MERCHANT? ? OR AGENT? ? OR RESELLER? OR DIST- RIBUT?R? ? OR RETAILER? OR MANUFACTURER?) (1W)S2
S8	6	TRADER? ?(1W)S2
S9	203909	SYNC???? ? OR HOTSYNC? OR DATASYNC? OR SYNCHRONIS?????? ? -

OR SYNCHRONIZ?????? ?

S10	309008	UPDAT???? ? OR UP() (DATE? ? OR DATING?)
S11	4810	S3:S8 AND S9:S10
S12	0	S1 AND S11
S13	2030	S3:S8 AND S9
S14	2932	S3:S8 AND S10
S15	152	S13 AND S14
S16	108	S15 AND S6
S17	0	S15 AND S7
S18	3441607	REPLIC? OR COPY? OR COPIE? ? OR DUPLICAT? OR REPRODUC? OR -
		RECREAT? OR RECONSTRUCT? OR MIRROR? OR CLON??? ? OR REGENERAT?
S19	89757	S18(2N) (DATA OR INFORMATION OR OBJECT? ? OR MESSAGE? OR FI-
		LE? ? OR CONTENT OR ECONTENT OR RECORD? ? OR REPORT? ?)
S20	32	S15 AND S19
S21	18	S16 AND S19
S22	275	S11 AND S19
S23	18	S22 AND S16
S24	32	S20:S21 OR S23
S25	6	S24/2002:2004
S26	26	S24 NOT S25
S27	18	RD (unique items)

27/7/1 (Item 1 from file: 256)  
 DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
 (c)2004 Info.Sources Inc. All rts. reserv.

00130927 DOCUMENT TYPE: Review

**PRODUCT NAMES:** Inktomi Traffic Server (659576); Inktomi Content Delivery Suite (748285); Media Delivery Network (051497)

**TITLE:** Inktomi Makes Sense of Complex Content  
**AUTHOR:** Notess, Greg R  
**SOURCE:** eContent, v24 n4 p60(2) Jun 2001  
**ISSN:** 0162-4105  
**HOME PAGE:** <http://www.onlineinc.com/econtent>

**RECORD TYPE:** Review  
**REVIEW TYPE:** Product Analysis  
**GRADE:** Product Analysis, No Rating

Inktomi's Inktomi Traffic Server, Content Delivery Suite (CDS), and Media Delivery Network are among currently available e-content management components that can manage, distribute, tracking, evaluate, balance, and remove content on larger, more complicated Web sites. As sites expand, and content quantities do likewise, the sites are often distributed over **many** redundant **servers** with multiple mirrors in geographically scattered areas. Therefore, the need for content management increases, including the need to control and document date and time of launch, duration of availability, and the audience to which it is delivered. However, many organizations also have to track usage and load-balance processing among servers. Inktomi's CDS can do this, and among its customers are sites that have often- **updated** content and that must keep content fresh over **multiple server** types and servers. CDS functions inside and outside firewalls and can govern rapidly changing content over **groups of servers**. Components provided include a Content Distributor and a Content Manager. Content Distributor **replicates content updates** to **many servers** while **synchronizing updates** to ensure that new content is available on all servers simultaneously. CDS manages static content, which can be plain text or on-demand media, including audio and video files.



REVISION DATE: 20020630

27/7/2 (Item 2 from file: 256)  
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
(c)2004 Info.Sources Inc. All rts. reserv.

00109811 DOCUMENT TYPE: Review

PRODUCT NAMES: Domino AS/400 (622419)

TITLE: What's in Domino for AS/400?  
AUTHOR: Hutchins, Ann  
SOURCE: News/400, p63(4) May 1998  
ISSN: 1040-6093  
HOMEPAGE: <http://www.news400.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

Lotus Development's Domino for AS/400 is a Domino server that works with IBM's AS/400 database, e-mail, and World Wide Web-serving capabilities and adds directory **synchronization**, workflow management, **data replication**, and other features in supporting e-commerce operations. Developers using Domino for AS/400 can write applications that move data among client PCs, Domino databases, and DB2/400. Important administration features in the new **update** include real-time and automatic **synchronization** of the Notes Public Address Book and the AS/400 System Distribution Directory. Also included now is two-way integration support of data running between Domino databases and DB2/400 and new database replication functionality for intelligently comparing and **synchronizing** two sets of data, such as e-mail on remote **clients** and **servers**. The built-in Web server, IBM's Internet Connection Secure Server, lets users use Notes' navigational features to search Notes. Domino for AS/400 is well-suited for applications combining traditional relational database data with free-format information.

REVISION DATE: 20031021

27/7/3 (Item 3 from file: 256)  
DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.  
(c)2004 Info.Sources Inc. All rts. reserv.

00098117 DOCUMENT TYPE: Review

PRODUCT NAMES: Global Directory Server (642495)

TITLE: Directory Server Supports LDAP and X.500  
AUTHOR: Alexander, Karen  
SOURCE: INTERNETWORK, v7 n11 p22(1) Nov 1996  
ISSN: 1055-1808  
HOMEPAGE: <http://www.internetnetworkweb.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

Isocor's now Wall Data's Global Directory Server (GDS) assists with network management with tools for management, **update**, **replication**, and **information** distribution. Lightweight Directory Access Protocol (LDAP) is supported, as are 93 X.500 protocols. Directory Services Protocol (DSP) and Directory Information Shadowing Protocol (DISP) can also be used for some scalability and distribution purposes. GDS is for large corporations and Internet service providers (ISPs) that need such features as address repositories and **synchronization**; Internet directory services through LDAP and DAP; World Wide Web access through the Web Connectivity Module; request chaining among servers through DSP; and data shadowing **between servers** with DISP. Isocor describes its product as 'innovative' and 'state of the art' because it allows intranets to depend on the directory as a principal application, and it supports secure document transactions with certificates collected from the directory. Disparate mail systems can have **synchronized** directories using the common directory format offered by X.500. GDS also supports a universal format for management of a directory, and these directories can be constructed from many messaging systems and formats. The IsoGate Directory **Synchronization** gateway is provided to **synchronize** address books from popular address books, including Lotus cc:Mail and Microsoft Mail.

REVISION DATE: 20020630

27/7/4 (Item 4 from file: 256)  
DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
(c)2004 Info.Sources Inc. All rts. reserv.

00091483 DOCUMENT TYPE: Review

PRODUCT NAMES: Microsoft Access 97 Windows 95 (387894); Microsoft SQL Server (259748); Lotus Notes (550418); Oracle Enterprise Server (546585)

TITLE: Better Replication Coming for Databases  
AUTHOR: Dobson, Rick  
SOURCE: Byte, v21 n5 p36(1) May 1996  
ISSN: 0360-5280  
HOMEPAGE: <http://www.byte.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Comparison  
GRADE: Product Comparison, No Rating

Developers, consultants, and vendors describe improvements they would like to see in replication functions of Microsoft's Access for Windows 95, Microsoft SQL Server, Lotus Development's Lotus Notes, and Oracle's Enterprise Oracle. Access developers would like better prebuilt conflict-solving rules when data records are modified. SQL Server users will get continuous replication for long text and image fields, plus one-way replication with DB2, Oracle, and Access in SQL Server 6.5. Some companies need bidirectional replication. For example, one user's Oracle 7 applications in three major business offices and other locations globally continuously insert, **update**, and query **records**. Lotus Notes' **replication** features are generally very satisfactory, but developers look forward to **synchronization** speed improvements and fewer replication conflicts in Notes 4.0. All developers would like replication among various vendors' databases to be accomplished without enabling third-party products.

REVISION DATE: 20031021

27/7/5 (Item 5 from file: 256)  
DIALOG(R) File 256:SoftBase:Reviews,Companies&Prods.  
(c) 2004 Info.Sources Inc. All rts. reserv.

00071958 DOCUMENT TYPE: Review

PRODUCT NAMES: OmniReplicator (540854)

TITLE: Praxis Expands Databases  
AUTHOR: McGee, Marianne Kolbasuk DePompa, Barbara  
SOURCE: Information Week, v499 p30(2) Oct 31, 1994  
ISSN: 8750-6874  
HOMEPAGE: <http://www.informationweek.com>

RECORD TYPE: Review  
REVIEW TYPE: Product Analysis  
GRADE: Product Analysis, No Rating

OmniReplicator is a database replication product that works with various databases from Praxis International, formerly called Computer Corporation of America. All important databases have the ability to replicate, or copy, **update**, distribute, and **synchronize** data, but most vendors do not support cross-database replication. The Praxis product will provide two-way **data replication** among various **data** sources and targets. This means that mainframe databases elements, such as DB2 tables, can be duplicated in more than one Windows NT or UNIX SQL database running in **client / server** systems. The user can assign **data replication** frequency based on data type. One prospective user, a senior software engineer, plans to **replicate** legacy **data** to a UNIX **client / server** system. Notes may currently provide the most popular database replication method, especially for reengineering purposes.

REVISION DATE: 20000830

27/7/6 (Item 1 from file: 2)  
DIALOG(R) File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

7300753 INSPEC Abstract Number: C2002-07-6160B-024  
Title: **Scaling replica maintenance in intermittently synchronized mobile databases**

Author(s): Wai Gen Yee; Donahoo, M.J.; Omiecinski, E.; Navathe, S.B.  
Author Affiliation: Coll. of Comput., Georgia Inst. of Technol., Atlanta, GA, USA  
Conference Title: Proceedings of the 2001 ACM CIKM. Tenth International Conference on Information and Knowledge Management p.450-7  
Editor(s): Paques, H.; Liu, L.; Grossman, D.  
Publisher: ACM, New York, NY, USA  
Publication Date: 2001 Country of Publication: USA xvii+597 pp.  
ISBN: 1 58113 436 3 Material Identity Number: XX-2002-00537  
U.S. Copyright Clearance Center Code: 1 58113 436 3/2001/0011...\$5.00  
Conference Title: Proceedings of CIKM'01: International Conference on Information and Knowledge Management  
Conference Sponsor: ACM SIGIR & SIGMIS  
Conference Date: 5-10 Nov. 2001 Conference Location: Atlanta, GA, USA  
Language: English Document Type: Conference Paper (PA)  
Treatment: Practical (P); Experimental (X)

Abstract: To avoid the high cost of continuous connectivity, a class of mobile applications employs **replicas** of shared **data** that are periodically **updated**. **Updates** to these replicas are typically performed on a client-by-client basis-that is, the server individually computes and transmits **updates** to each client limiting scalability. By basing **updates** on replica groups (instead of clients), however, **update** generation complexity is no longer bound by client population size. Clients then download **updates** of pertinent groups. Proper group design reduces redundancies in server processing, disk usage and bandwidth usage, and diminishes the tie between the complexity of **updating** replicas and the size of the client population. We expand on previous work done on group design, include a detailed I/O cost model for **update** generation, and propose a heuristic-based greedy algorithm for group computation. Experimental results with an adapted commercial replication system demonstrate a significant increase in overall scalability over the client-centric approach. (12 Refs)

Subfile: C

Copyright 2002, IEE

27/7/7 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

7075384 INSPEC Abstract Number: C2001-12-6150N-054

**Title: Achieving replication consistency using cooperating mobile agents**

Author(s): Cao, J.; Chan, A.T.S.; Wu, J.

Author Affiliation: Lab. of Internet Comput. & E-Commerce, Hong Kong Polytech., Kowloon, China

Conference Title: Proceedings International Conference on Parallel Processing Workshops p.453-8

Editor(s): Pinkston, T.M.

Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA

Publication Date: 2001 Country of Publication: USA xx+498 pp.

ISBN: 0 7695 1260 7 Material Identity Number: XX-2001-02014

U.S. Copyright Clearance Center Code: 1530 2016/2001/\$10.00

Conference Title: Proceedings International Conference on Parallel Processing Workshops

Conference Sponsor: Int. Assoc. Comput. & Commun

Conference Date: 3-7 Sept. 2001 Conference Location: Valencia, Spain

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: One problem in replication is coordinating the **updates** made to the copies maintained at **different** replicated **servers** so that data consistency is ensured. The paper presents a novel approach to designing protocols for accessing **replicated data** in a large-scale distributed environment such as the Internet. Unlike traditional message-passing based protocols which require expensive exchanges of **messages** among the **replicated** servers, the proposed approach uses cooperating mobile agents to **synchronize** the access to the **replicated data** at **different servers**. The design of such a mobile-agent enabled, fully-distributed protocol is presented and a prototypical implementation using IBM's Aglets is described. The performance of the protocol is also discussed. (12 Refs)

Subfile: C

Copyright 2001, IEE

27/7/8 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

6448256 INSPEC Abstract Number: C2000-02-6155-002

**Title:** Scalable consistency protocols for distributed services

**Author(s):** Ahamad, M.

**Author Affiliation:** Coll. of Comput., Georgia Inst. of Technol., Atlanta, GA, USA

**Journal:** IEEE Transactions on Parallel and Distributed Systems vol.10, no.9 p.888-903

**Publisher:** IEEE,

**Publication Date:** Sept. 1999 **Country of Publication:** USA

**CODEN:** ITDSEO **ISSN:** 1045-9219

**SICI:** 1045-9219(199909)10:9L:888:SCPD;1-T

**Material Identity Number:** N785-1999-010

**U.S. Copyright Clearance Center Code:** 1045-9219/99/\$10.00

**Language:** English **Document Type:** Journal Paper (JP)

**Treatment:** Practical (P)

**Abstract:** A common way to address scalability requirements of distributed services is to employ server replication and client caching of objects that encapsulate the service state. The performance of such a system could depend very much on the protocol implemented by the system to maintain consistency among object copies. We explore scalable consistency protocols that never require synchronization and communication between all nodes that have copies of related objects. We achieve this by developing a novel approach called local consistency (LC). LC based protocols can provide increased flexibility and efficiency by allowing nodes control over how and when they become aware of updates to cached objects. We develop two protocols for implementing strong consistency using this approach and demonstrate that they scale better than a traditional invalidation based consistency protocol along the system load and geographic distribution dimensions of scale. (37 Refs)

**Subfile:** C

**Copyright** 1999, IEE

27/7/9 (Item 4 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2004 Institution of Electrical Engineers. All rts. reserv.

6390859 INSPEC Abstract Number: C1999-12-6150N-027

**Title:** Twin-transactions - delayed transaction synchronisation model

**Author(s):** Rasheed, A.; Zaslavsky, A.

**Author Affiliation:** Sch. of Comput. Sci. & Software Eng., Monash Univ., Clayton, Vic., Australia

**Conference Title:** Object-Oriented Technology. ECOOP'98 Workshop Reader. ECOOP'98 Workshops, Demos, and Posters. Proceedings p.311-12

**Editor(s):** Demeyer, S.; Bosch, J.

**Publisher:** Springer-Verlag, Berlin, Germany

**Publication Date:** 1998 **Country of Publication:** Germany xxii+573 pp.

**ISBN:** 3 540 65460 7 **Material Identity Number:** XX-1999-01939

**Conference Title:** Object-Oriented Technology. ECOOP'98 Workshop Reader

**Conference Date:** 20-24 July 1998 **Conference Location:** Brussels, Belgium

**Language:** English **Document Type:** Conference Paper (PA)

**Treatment:** Practical (P)

**Abstract:** In a mobile computing environment, mobile hosts are not available all the time. Thus mobile computers are usually considered as clients who can connect to different servers and ask for certain services ( client - server ). To reduce the contention on the narrow bandwidth of the wireless channel, one needs to cache part of a database on mobile computers. When a mobile computer also hosts data, this data will

not be available all the time. **Replication** of this **data** will make the data available, but will create concurrency and consistency problems. The twin-transaction model replicates transaction-processing flow along with data items stored on mobile hosts. We explain how the twin-transaction model uses a meta-object to act as a control centre to authenticate transactions, and how the **update synchronisation** problems are resolved. (3 Refs)

Subfile: C

Copyright 1999, IEE

27/7/10 (Item 5 from file: 2)  
DIALOG(R) File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

5623042 INSPEC Abstract Number: C9708-7150-011

**Title: Mobile computing in military ambulatory care**

Author(s): Bukhres, O.; Morton, S.

Author Affiliation: Dept. of Comput. Sci., Purdue Univ., Indianapolis, IN, USA

Conference Title: Proceedings. Tenth IEEE Symposium on Computer-Based Medical Systems (Cat. No.97CB36083) p.58-63

Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA

Publication Date: 1997 Country of Publication: USA xi+262 pp.

ISBN: 0 8186 7928 X Material Identity Number: XX97-01296

U.S. Copyright Clearance Center Code: 1063-7125/97/\$10.00

Conference Title: Proceedings of Computer Based Medical Systems

Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Comput. Med.; IEEE Eng. Med. & Biology Soc

Conference Date: 11-13 June 1997 Conference Location: Maribor, Slovenia

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

**Abstract:** Although satellite and cellular communication advances have enabled users of mobile computers the ability to access information regardless of location, it introduces new problems for transaction management in distributed database systems. Traditional transaction mechanisms and criteria have to be adjusted to accommodate the limitations of a mobile computing environment. **Data replication** is an example of a technique that is used in traditional database systems to increase the availability and the fault-tolerance of the data, but at the same time adds the overhead of maintaining replica consistency across multiple sites of the network. **Data replication** is a useful tool in mobile computing due to the fact that a mobile host may be disconnected from the network for long periods of time. The **data replication** allows the mobile host to use a local **data copy** while it is disconnected from the **network**. Mobile **hosts** that have the capability to store **copies** of **data** items increase the difficulty of maintaining replica consistency, because of the mobile host's volatile storage. Also, the mobile host must be assured that the local copies that it is using are valid, and any changes made locally to a copy are reflected in the rest of the system. We introduce a mobile replica management algorithm. A mobile transaction manager (MTM) coordinates the transactions initiated by mobile hosts, which query and **update** replicated databases stated at both mobile and static hosts in a battlefield environment. This battlefield environment is based upon the U.S. telemedicine (Prime Time III) support in Bosnia. The MTM is responsible for the **synchronization** of the **replicated data** items in the network. (15 Refs)

Subfile: C

Copyright 1997, IEE

27/7/11 (Item 6 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

5484863 INSPEC Abstract Number: C9703-6160-005

**Title: Transient versioning for consistency and concurrency in client - server systems**

Author(s): Gukal, S.; Omiecinski, E.; Ramachandran, U.

Author Affiliation: Coll. of Comput., Georgia Inst. of Technol., Atlanta, GA, USA

Conference Title: Proceedings of the Fourth International Conference on Parallel and Distributed Information Systems (Cat. No.96TB100085) p. 274-85

Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA

Publication Date: 1996 Country of Publication: USA xi+295 pp.

ISBN: 0 8186 7475 X Material Identity Number: XX96-03187

U.S. Copyright Clearance Center Code: 0 8186 7475 X/96/\$5.00

Conference Title: Proceedings of 4th International Conference on Parallel and Distributed Information Systems

Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Data Eng.; ACM SIGMOD

Conference Date: 18-20 Dec. 1996 Conference Location: Miami Beach, FL, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Theoretical (T)

Abstract: **Synchronization** and cache consistency limit the performance of data-shipping **client - server** systems. Both the problems arise because existing methods treat cached **data** as **replicated data**. The paper proposes a new method using transient versioning concepts to reduce the effect of these problems. **Copies** of **data** in different client caches are treated as different versions of the data. Multiple versions reduce cache consistency overhead since **updating** a data page creates a new version and does not require invalidating copies of that page in other caches. The transient versions also increase concurrency by allowing multiple readers and one writer to simultaneously access the same page. Simulation experiments show that this method performs better than the existing methods in different environments and is easily adaptable to mixed and/or changing workloads. (18 Refs)

Subfile: C

Copyright 1997, IEE

27/7/12 (Item 7 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2004 Institution of Electrical Engineers. All rts. reserv.

01754039 INSPEC Abstract Number: C81033018

**Title: A majority consensus algorithm for the consistency of duplicated and distributed information**

Author(s): Seguin, J.; Sergeant, G.; Wilms, P.

Author Affiliation: CIGG, Grenoble, France

Journal: Journal of Digital Systems vol.5, no.1-2 p.103-24

Publication Date: Spring-Summer 1981 Country of Publication: USA

CODEN: JDSYDF ISSN: 0195-4350

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: An effective sharing of information on a network may require the **duplication** of this **information** on **several hosts**. The algorithm

developed for management of the consistency of duplicated copies guarantees logical uniqueness of the information in spite of the physical multiplicity of the copies; a distributed concurrency control robust to failures is based on a majority consensus before processing an **update** . Each **update** embodies two **synchronization** steps which follow the classical scheme of locking, **updating** , and unlocking the entity to be modified. Nutt's evaluation nets are used to describe this algorithm; such formalism fits well the representation of finite state automata. (11 Refs)

Subfile: C

27/7/13 (Item 1 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
(c) 2004 ProQuest Info&Learning. All rts. reserv.

01598818 ORDER NO: AAD98-00728  
**MAINTAINING CONSISTENCY IN MOBILE SYSTEMS (ASYMMETRIC CHANNELS, MOBILE COMPUTING, CACHE CONSISTENCY, DISTRIBUTED SYSTEMS)**

Author: GURIJALA, ANIL KUMAR REDDY  
Degree: PH.D.  
Year: 1997  
Corporate Source/Institution: TEXAS A&M UNIVERSITY (0803)  
Chair: UDO W. POOCH  
Source: VOLUME 58/07-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 3820. 88 PAGES

In the **client - server** based systems, data is cached at clients to improve the performance. When data items are **updated** at the server, inconsistency arises among these copies. Maintaining consistency is one of the major issues in these systems. This problem is more complicated in mobile systems because of the low bandwidth and asymmetric wireless channels, and the mobile and resource poor clients. The objective of this research is to study various issues associated with maintaining consistency in the mobile systems.

In some applications, the wireless channels are treated as one-way broadcast channels to improve the scalability. In these channels, the clients do not send requests to the server. The server continuously broadcasts the data over the channel. The clients listen to the channel and access the required data whenever it is broadcast. To improve the performance, the clients cache data. Consistency problems arise when the data is **updated** at the server. Two schemes, immediate propagation scheme and invalidation scheme, are used in the traditional systems. The performance of these schemes in the one-way broadcast channels is analyzed.

Many other issues arise while using these schemes in this environment. Some of these issues, like missing **updates** , effect on the tuning time and tolerating communication errors, are discussed.

The mobility of clients is another parameter that affects consistency and performance in distributed systems. In distributed systems, **data** is often **replicated** at **multiple servers** . **Data copies** at these servers are periodically **synchronized** to reduce the communication overhead. But, in a mobile system, a client often moves from place to place. If the servers are not in consistent state, it has to access from the previous server, which incurs a high communication cost. An optimal period of **synchronization** which depends on the mobility rate of clients is calculated. Similarly, various schemes that are used to improve the data access time of a mobile client are analyzed.

27/7/14 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus



(c)2004 Japan Science and Tech Corp(JST). All rts. reserv.

03485763 JICST ACCESSION NUMBER: 98A0314329 FILE SEGMENT: JICST-E  
**Data Transfer Architecture of Optimistic Data Consistency Model.**  
KURODA MASAHIRO (1); WATANABE TAKASHI (1); MIZUNO TADANORI (1); PENG L (2)  
; SHIMOTSUMA YOSHIKI (3)

(1) Shizuoka Univ.; (2) Mitsubishi Electric Information Technol. Center  
America; (3) Mitsubishi Electr. Corp.  
Joho Shori Gakkai Kenkyu Hokoku, 1998, VOL.98,NO.13(MBL-4), PAGE.45-50,  
FIG.2, REF.5

JOURNAL NUMBER: Z0031BAO ISSN NO: 0919-6072  
UNIVERSAL DECIMAL CLASSIFICATION: 681.3:061.68 621.396 681.3:654  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: This paper proposes a data transfer architecture and its data transfer optimization consideration suitable for an optimistic data consistency model which evolves the existing optimistic consistency scheme. This model consists of three components: primary servers, secondary servers, and **clients**. Primary **servers** form an infrastructure core for systems based on this model. Secondary servers **duplicate data** from primary servers using the optimistic consistency model. Clients are entities for information retrieval from primary/secondary servers. This data transfer architecture is layered into three layers in order to achieve efficient data transfer for data **synchronization** depending on the data characteristics in each layer. The separation of parameters for efficient data transfer from this data **synchronization** will add this model flexible feature for "anytime anywhere" mobile network computing. (author abst.)

27/7/15 (Item 1 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00507544 98NC09-102

**Novell Replication Services 1.21: sophisticated simplicity**

Feldman, Jonathan

Network Computing , September 15, 1998 , v9 n17 p33-34, 2 Page(s)

ISSN: 1046-4468

Company Name: Novell

URL: <http://www.novell.com/nrs>

Product Name: Novell Replication Services 1.21

Presents a favorable review of Novell Replication Services (NRS) 1.21 (\$995, per server), a **multi - server** file **synchronization** solution from Novell (888). Runs on Windows 95-based and Windows NT-based networks. Features both one- and two-way replication, options for including or excluding hierarchy, and compression support. Also provides a means for handling multiple **updates** of a single file from **different servers**. Complains that it lacks supp for Macintosh and Unix, and criticizes its inability to **replic** complete database **files**. Concludes that overall, NRS is a use tool for managing large NetWare installations. Includes one screen display. (kgh)

27/7/16 (Item 2 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00462864 97LA06-312

**Drilling down on NDS time synch -- A solid design for time synch boils down to choosing between single-reference and time-provider group configurations and using...**

Hughes, Jeffrey F; Thomas, Blair W

LAN Times , June 23, 1997 , v14 n13 p77-78, 2 Page(s)

ISSN: 1040-5917

The HANDS ON column features an overview of time **synchronization** on Novell networks. Explains that if a **network server** 's time and partition time stamps are out of **synch** , synthetic time is launched. Explains that synthetic time creates time stamps that **update** NDS, so stored **information** will **replicate** among servers in **synch** . Discusses several time options that are available to the administrator, such as single-reference **synchronization** and Time-provider group **synchronization** . Reports on situations in which each is best used. Also discusses a secondary-to-secondary configuration option for **multiple servers** on a WAN. Claims that following this advice will prevent synthetic time-error messages on a network. Includes one diagram. (kgh)

27/7/17 (Item 3 from file: 233)

DIALOG(R)File 233:Internet & Personal Comp. Abs.

(c) 2003 EBSCO Pub. All rts. reserv.

00445145 96IW12-105

**Lotus keeps users, sites in sync -- On the edge of the Piscataqua River in Portsmouth, NH, a Lotus subsidiary called Edge Research seeks to extend the power of. . .**

Biggs, Maggie

InfoWorld , December 9, 1996 , v18 n50 pIW3, 1 Page(s)

ISSN: 0199-6649

Company Name: Lotus Development

Product Name: Lotus Weblicator

Presents a favorable review of the alpha version of Weblicator (\$29), a 32-bit Windows Web replication tool from Lotus Development Corp. of Cambridge, MA (617). Says that this powerful tool helps to manage two-way replication **across HTTP servers** in an enterprise. Adds that it provides easily managed replication scheduling, monitors that can check for changes in Web pages, and fast performance. However, criticizes its unfinished interface and lack of an installation function. Concludes Weblicator is worth a look if ``you need to enable **data replication** within your intranet, **update** HTML forms while offline, or simply pull HTTP data onto your users' desktops for offline viewing.'' Includes one screen display and one summary card. (dpm)

27/7/18 (Item 1 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)

(c) 2002 The Gale Group. All rts. reserv.

06529175

Numetrix brings object messaging to the supply chain

SINGAPORE: DOMA BROUGHT TO NUMETRIX SUPPLY CHAIN

Computerworld (XCK) 09 Oct 1997 P.2

Language: ENGLISH

The distributed object messaging architecture (DOMA) technology has been brought by Numetrix to its supply chain management software components suite in Singapore. DOMA allows the sharing of processing/communication bandwidth across an enterprise. It prevents bottlenecks of typical **client**

- **server** applications by permitting the creation of numerous **copies** of relevant **data** subsets via an integrated **synchronisation** mechanism. Users are not required to constantly poll the server for the latest information. DOMA will deliver automatic **updated** messages to all interested users.  
?